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CHAPTER – I

INTRODUCTION

Introduction of the study is a main text that researcher attempts to introduce the total overview of the research, it includes critical points of current knowledge of the research as well as structure of the research. In this chapter, an attempt is made to introduce the Background of the study, Significance of the study, Theoretical framework and Chapterization.

1.1. Background of the Study

1.1.1.Adolescence

The word adolescence comes from the Latin verb adolescence, which means "to grow" or to grow to maturity". Adolescence is a part of transition when the individual changes physically and psychologically from a child to an adult. It is much more their one rung up the ladder from childhood. It is the period, which begins with puberty and ends with general cessation of physical growth which emerges from the later childhood stage and merges into adulthood, it is a built in necessary transition period for ego development.

1.1.2. Definitions

Adolescence is generally a period between the ages of 10 to 19 (World Health Organization).

A.T. Jersld defines adolescence as "that span of years during which boys and girls move from childhood to adulthood, mentally, emotionally, socially and physically".

Jean Piaget: defines adolescence as "the age of great ideals and beginning of theories as well as the time of simple adaptation of life".

Puberty: In the young child, the levels of both the ovarian hormones and the tropic hormones which regulate their output are very low. Therefore, the developmental changes both physical and psychological which are dependent upon these hormones cannot take place. It is believed that, at this stage, the hypothalamus is very sensitive to the presence of circulating estradiol and progesterone so that small quantities of these hormones effectively inhibit the output of the trophic hormones since the latter are therefore only released in tiny amounts and ovarian activity is restrained. As early as the age of 8 or 9 years, the hypothalamus starts to lose its sensitivity to circulating ovarian hormones. This results in the production of increasing amounts of the trophic hormones LH (Luteinizing Hormone, a small gland located underneath the brain, plays a vital role in sexual development and functioning in women which helps the release of an egg from the ovary) and FSH (Follicle Stimulating Hormone which is synthesized and secreted by the gonadotropic cells of the anterior pituitary gland which regulates the development, growth, pubertal maturation and reproductive process of the body).These can stimulate the ovaries to secrete greater quantities of estrogen and the hormone dependent changes of puberty begin to take place. These changes include physical growth, fat deposition, breast development and growth of body hair, growth of the reproductive tract and the appearance of the first menstrual period (menarche). The whole process of puberty normally takes many years.

1.1.3. Significance of Adolescence Period

Adolescence period is the most important period of human life. Adolescence is a time when the individual is expected to be prepare for the adulthood by replacing childish attitude and behavior patterns with those of an adult type.

The mission of the adult world is to understand the adolescence stage of human development and to help the teenagers become adults by raising their standards and values. The task for the adult world is to make adolescents a step towards growing up, not a privilege to be exploited. Recent statistics of the changes in behavior throughout adolescence have revealed not only the changes are more rapid in the early than in the later part of adolescence but also that the behaviors and attitudes of the individual in the early part of the period are markedly different from those in the later part of the period. As a result it has become a widespread practice to divide adolescence into two periods as early and later adolescence periods.

Early adolescence begins when the individual becomes sexually mature. For the average girl of today's scenario, early adolescence begins at thirteen years and for boys approximately a year later. The dividing line between early and late adolescence is placed around 17 years.

1.1.4. Characteristics of Physical Development

The following are the major characteristics features of physical development during the adolescent period:

According to D.Cole "Adolescence is a period of growth in all systems of the body in the course of a few years the individual undergoes changes both in his/her size and in internal chemistry. Changes which taken from a childhood to an adult level. The rapidly, variety, and force of these developments are alike bewildering even while they are often exciting. The alterations indeed so extensive that some people have regarded adolescence as a sort of second."

In the light of the above definition, let us know the bodily changes that take place during adolescence period. Important external and internal bodily changes that take place during adolescence are mentioned below :

- Height : The average girl reaches to her mature height between the ages of 16. During this period, there is a rapid physical growth and dramatic bodily changes. The glands become active and there is an increased production of hormones. Almost all girls show a spurt in growth during this period. There is a sudden shoot-up in growth especially in the height. The age at which it occurs differs from individual to individual.The growth in height is associated with puberty growth period ranges from 13 to 17 years.
- Weight: The weight changes below a timetable similar to that of height changes.
- Body proportions: The various parts of the body gradually come into proportion. The trunk broadens and lengthens. Hence, the limbs no longer seen too long.
- Sex Organs: Both female and male sex organs reach their mature size in late adolescence.
- Endocrine System: Temporary imbalance of the endocrine system can be observed during early adolescence stage. The sex glands become functional.
- Body Tissue: The skeleton strips begin to grow at the mature level i.e., bones reach their mature size.
- Appearance: The different parts of the body grow at different times. The arms and legs grow in length and become finer. The pelvic bones of girls become broadened and their waist becomes circular. The breast starts growing at the mature level.

1.1.5. Characteristics of Social Development

At this stage social changes are reflected in the influence of peer group where new values cultivate in friendship, in social acceptance and rejection and also in the selection of leaders. An adolescent responds to the parents at home but he/she is also very keen to

confirm to the demands of his/her peers. They are in the stage between childhood and adulthood. Hence, they are neither children nor adults; this leads to obtaining great satisfaction and conforming in close association with their contemporaries. The following are the important social development during adolescence period.

i. Increased peer influence.
ii. Changes in the area of inter sexual relationships.
iii. Social activities at their peak.
iv. New values in the selection of friends and teachers.
v. It shows a gregarious instinct for living in groups.

1.1.6. Needs of Adolescents

Adolescents emerge from childhood and merge into adulthood. It is marked by a sudden spurt in growth. It is due to fast changes in physical, mental, emotional and social dimensions. They have several needs which are as follows:

- ✓ Need for freedom from dependence : The adolescents learn to accept responsibility and parents must learn to treat the adolescents as separate responsible individuals and not as independent children.
- ✓ Need for association with the opposite sex: This need arises due to maturation of sex organs. A higher rate of love affairs occurs during this period. The attraction of one sex towards the other leads to an emphasis upon physical appearance. Clothing becomes very important during this period. Depreciation of association with the opposite sex may lead to all sorts of personality maladjustment. In extreme cases, homosexuality is established instead of normal behavior.
- ✓ Need for self-support: This need indicates the desire of the adolescent to find out his place in the world. He begins to think seriously of what he would like to be and acquire financial independence from parents.
- ✓ Need for a philosophy of life: There is a need for some principles, which interests or a balance between conflicting desires, impulses, and ambitions

that surround the individual. It implies a certain point of view or attitude towards self, others, and the world, etc. Religion acts as an instrument to have a sex philosophy of life.

- ✓ Need for adventure: Since during this stage, lots of hormones and glands start functioning. They secrete more juice into the digestive system. There by generating a lot of energy which has to be used in a constructive way and with the matured organism, adolescent wants to explore the world, hence, has adventurous instinct with him and wants to use them in a suitable environment.
- ✓ Need for social approval: The adolescent possesses all the adult characteristics, he expects society to approve all his deeds, but sometimes society may reject them.
- ✓ Need to satisfy the ambition of the elders: Since the elders are the role models, they impose their certain ambitions, which they would not be achieved at that stage on their children. This necessitates the need to satisfy the elders' ambitions for the adolescent.
- ✓ Need for social adjustment: Adjustment has to be a led by an adult life in society, it arises the need for the individual to adjust to the existing social norms and moves. He cannot think of living independently without society.
- ✓ Need for guidance: The adolescent period is a transitional period from childhood to adulthood, adolescents are left independently to act freely in society, it necessitates than to get guidance from the elders, teachers and parents etc. So that they get the required information and plan their future course of action.

1.1.7. Problems of Adolescents

The period of adolescence is already graded as a period of stress and strain. Changes in the adolescence period are likely to be accompanied by many potential difficulties. Most of the problems of adolescents are due to conflicts and frustrations. G.Stanley Hall conducted a systematic study on this area and listed the following as the major problems of adolescents.

i. Adjustment in home
ii. Adjustment in society
iii. Adjustment with the opposite sex
iv. Freedom from dependence
v. Adjustment in suitable vocation
vi. Developing a sound philosophy of life
vii. Financial problem
viii. Generation gap
ix. Satisfying elder's ambition and dominance
x. Adjustment with emotional disturbances

1.2. Recommendations of National and International Agencies

The present concept of reproductive health knowledge saw a scientific and global beginning with population studies and population education. It focused on developing an individual's framework towards the population and its impact on oneself. As defined by UNESCO seminar (1970), population education is an educational programme which provides for a study of the population situation in a family, community, nation and the world, with the purpose of developing in the adolescents' rational and responsible attitude and behaviour towards that situation.

The reproductive health issues gained recognition in 1974, momentum in the year 1984 and was crystallized at the International Conference on Population and Development (ICPD) 1994. The concept of reproductive health attracted a wide attention during the ICPD conference (1994). ICPD 1994 emphasized on addressing adolescent reproductive health issues by promotion of responsible and healthy reproductive and sexual behaviour. The conference also raised concern for protecting the human rights and well-being of

adolescents and encouraging the active participation of adolescents in the process of socio-economic development. The rights of adolescents have been focused as the most controversial topic in the U.N. Conventions. During ICPD, the following sensitive rights of adolescents were recognized:

- The right to the enjoyment of the highest attainable standard of health,
- The right to privacy, confidentiality and informed consent,
- The right to reproductive health education, information and care (UN, 1994).

A World Health Assembly resolution of May 1995 presents an outline of the global reproductive health strategy. This global strategy focuses on three main interrelated areas:

- Advocacy for the concept and for political commitment to reproductive health, for an "enabling" environment for wide participation and for increased resources for reproductive health programmes,
- Research and action to support promotion and protection of reproductive health, prevention of specific reproductive health problems, care and rehabilitation for all when needed, and
- Attention to the special reproductive health needs and concerns of women, to underserved groups such as adolescents, to the roles and responsibilities of men, and to such population groups as refugees and displaced people.

In the National Curriculum Framework for School Education, N.C.E.R.T. (2000) on Population Education

- Under the caption 'Integrated Diverse Curriculum Concerns,' it states, "At a time when concerns such as literacy, family system, neighborhood

education, environmental education, human rights education, legal literacy, peace education, migration education, global education and safety education are making a case for separate places in the school curriculum. The best approach would be to integrate these ideas and concepts, after a careful analysis in the existing areas of learning. Appropriate strategies for this integration may be suitably worked out in the detailed subject curricula."

- Under the caption 'general objectives of education, it includes (a) appreciation of the various consequences of large families and over-population and the need for checking population growth. (b) Cultivating the power of understanding of and attitude towards healthy sex- related issues and a respectful attitude towards members of the opposite sex (NCERT, 2000).

The Ministry of Health and Family Welfare (2000) was focused on important aspects of reproductive health services, which include information dissemination, guidance and support which are challenging responsibilities for the health care and education systems for adolescents in India (Warenius et al., 2007). Warenius et al. (2007) also found that gender norms and values related to culture and religion are influential barriers to communication on reproductive health issues among adolescents in Indian society.

The National Institute of Public Cooperation and Child Development (NIPCCD) in 2007 carried out a study to address the issue of understanding practices of adolescent girls regarding reproductive health and how adolescent girls maintain hygiene during menstruation and the various consequences that affect their lifestyle. The study was conducted in one district each of Assam, Delhi, Karnataka, Madhya Pradesh, and Uttar Pradesh.

The Ministry of Health and Family Welfare (MOHFW), Government of India has included Adolescent Reproductive and Sexual Health (ARSH) as a key technical strategy under the National RCH II programme. This strategy focuses on reorganizing and strengthening the existing public health system in order to meet the reproductive and sexual health needs of adolescents. Reproductive health issues are now being built into the nutrition and health education (NHED) component of both the ICDS and RCH programmes for reaching out to the mothers/caregivers in the community.

Adolescent Reproductive and Sexual Health (ARSH) has been identified as one of the four strategies under RCH-II. The Ministry of Family Welfare has introduced a scheme, 'Menstrual Hygiene Programme' for the promotion of menstrual hygiene among adolescent girls in the age group of 10-19 years in rural areas in order to provide low-cost sanitary napkins to adolescent girls to promote menstrual hygiene among women. The sanitary napkin packs (containing 6 pieces each) are branded as 'Freedays'.

Reproductive Maternal Newborn Child and Adolescent Health (RMNCH +A), 2013 is a strategy that embodies a vision for comprehensive and integrated health services, most importantly for adolescents, mothers, and children. The 'Plus' in the strategic approach of RMNCH+A denotes the inclusion of adolescence as a distinct 'life stage' in the overall strategy and priority interventions for adolescents including the following:

- Adolescent nutrition; iron and folic acid supplementation
- Facility-based adolescent reproductive and sexual health services (Adolescent health clinics)
- Information and counseling on adolescent's sexual reproductive health and other health issues

- Menstrual hygiene
- Preventive health checkups

UNICEF envisions a world where every girl can learn, play, and safeguard her own health without experiencing stress, shame, or unnecessary barriers to information or supplies during menstruation. UNICEF's support to menstrual health and hygiene is aimed at improving outcomes on education, health, and gender equality for girls and women. By comprehensively addressing a range of factors - such as building self-efficacy, developing a positive policy and programme environment, effecting social change and increasing access to materials and facilities - UNICEF will continue to support girls and women to have the confidence, knowledge, and skills to manage their menstruation safely, using appropriate materials and facilities, at home and away from the household.

Specifically, achieving these goals requires addressing four interrelated determinants; social support, knowledge and skills, facilities and services, and materials and supplies – along with improvements in the enabling environment through appropriate policies, coordination, financing, capacity building, and monitoring in the education, health, and Water Sanitation and Hygiene WASH sectors. Because of its transformational potential, Menstrual Health and Hygiene (MHH) is one of UNICEF's five interlinked priorities for empowering adolescent girls in its Gender Action Plan 2018-2021, which accompanies its broader Strategic Plan for the same period and is approved by the Executive Board. The Gender Action Plan is UNICEF's commitment to achieving gender equality and girls' empowerment. The five priorities of the Gender Action Plan, implemented together and at scale, can dismantle some of the most stubborn barriers to gender equality and transform the lives of adolescent girls – supporting them to become

healthy, educated and empowered women, able to direct the course of their own lives. The priorities of the Plan are monitored and reported on annually.

Social support: Many girls and women face discriminatory attitudes and beliefs around menstruation that lead them to experience their menses with shame and embarrassment. Girls' experiences in schools reveal common challenges, often due to unsupportive social environments: stress, teasing, and a range of restrictions on everything from school attendance to food choices are common. Girls should be able to participate in daily activities during their period without being subjected to stigma or exclusion from peers, parents, teachers, or community leaders. Community involvement, which specifically includes boys and men, and traditional and religious leaders, is key to changing perceptions, practices and, ultimately, national policies.

Knowledge and skills: Many girls achieve menarche without critical information about menstruation, resulting in fear. This information may come too late, after a girl has had her first period, or not at all, due to taboos around puberty education linked to sexual and reproductive health. Before they reach menarche, girls need an understanding of the biology of the menstrual cycle and the opportunities to learn the skills to safely and privately manage menstruation – and the pain that they may experience during it. Teachers, parents, and traditional leaders have a similar need for accurate information, so that they are in a better position to support girls as they approach menarche and menstruation.

Facilities and services: Girls and women frequently lack the water, toilets, and disposal mechanisms to manage their menstruation at school, at home, at work, and in other public institutions such as healthcare facilities or government buildings. In some cases, it

can be a barrier to school attendance, causing girls to miss out on their education. Menstrual Health and Hygiene facilities and services should be established in a sustainable, safe and appropriate manner. Environmentally friendly, culturally-appropriate, safe and efficient hygiene and waste management approaches should be based on the best solution depending on the context. WASH (Water Sanitation and Hygiene) facilities and reliable services must allow women and girls to safely, comfortably, and privately manage.

Materials: Access to high quality, appropriate hygienic absorbent materials to manage menstruation is lacking for most girls and women in UNICEF programme countries. UNICEF works to ensure that girls and women have access to a range of affordable and appropriate options rather than promoting any one option. This may involve working with government and the private sector to set standards for products, sharing research findings with the private sector to stimulate innovation to meet demand, or other approaches. There is no one menstrual material or product that suits every girl and woman in all settings. Girls and women have different needs and preferences for MHH (Menstrual Hygiene and Health) materials, and these may change further depending on whether they are at school, at home, at work, or in other public settings. Girls and women with different types of disabilities may also have specific preferences depending on their situation. There is need to increase efforts to increase availability and choice of menstrual hygiene materials, considering affordability, sustainability, disposal, and local market considerations. Solutions looking at wider market actions, such as the development of manufacturing standards or removing tariffs on sanitary products, should be considered.

In development programmes, UNICEF generally does not procure menstrual hygiene materials and supplies as such direct supply assistance is unsustainable over the

longer term. UNICEF can instead play a key role in strengthening the state, market, and community systems that can sustainably supply menstrual hygiene materials without reliance on external funding. UNICEF can support a ministry of education to budget for the provision of menstrual hygiene materials for girls, or work with local school management committees on a local recurrent fundraising mechanism. At the community level, Village Savings and Loan Associations have been shown to support women effectively to save and invest in strategic goods including Menstrual Hygiene Materials products.

Expanding access to a range of materials, rather than offering or promoting only one option, ensures freedom of choice and dignity, enabling girls and women to decide based on their own preferences and individual needs. To support the introduction of new materials on the market, some UNICEF offices have worked with government to develop national product standards – which should of course be informed by an analysis of the situation with supply and programme colleagues.

According to UNICEF (2016), Adolescents defined by the United Nations as "those between the age of 10-19 years, number 1.2 billion in the world today, making up 16% of world's population". Almost 90 percent of global population lives in developing nations, in respect to the number; India is home to more adolescents around 243 million than in any other country. Mukhopadhyay et al., (2005) revealed that inadequate diet and non-conducive environmental conditions in developing countries may adversely influence the growth and nutritional status of adolescents. Malnutrition covers both undernutrition and overnutrition refers to an important of health, due to lack or an excess or imbalance of nutrients. As per the WHO (2005), during the period of adolescence every individual need

for the nutrient is most important for the proper growth and development; the improper nutrition intake in this phase may effect on growth and well being of an individual.

India has the largest population of adolescents in the age group of 10 – 19 years live in this country. This age group forms 21.4 percent of the aggregate population in India as indicated by UNFPA profile. Adolescents' age of 12-17 years old who are in excellent health were 81.6% while the adolescents of 12-19 years old who are obese were 20.6% (National Center for Health Statistics NCHS, 2017). In India, the number of adolescents are undernourished and the issue is more among girls (45%) than boys (20%), essentially because of profound established gender discrimination given in UNFPA profile. According to the World Nutrition Situation Report (2004), in India alone, there are around 60 million adolescents who are underweight; this prevalence is higher in rural areas than urban areas.

1.3.Reproductive Health of Adolescent Girls

Traditional norms and beliefs, socio-economic conditions, and the physical infrastructure, influence the practices related to menstruation. According to cultural traditions, a woman must abstain from cooking and salting food, as it is a taboo to do so when menstruating. Girls in villages and from poor families cannot get hold of and/or afford sanitary pads, which would normally be changed around two to four times a day during menstruation. Instead, the majority of women and girls use rags, usually torn from old blankets, or chitinges (traditional cotton shawls which Indian women wrap around their neck) and tissue of any kind. The rags are often washed with inadequate and unsafe water and without soap, and used repeatedly. The gender- unfriendly general infrastructure, especially in educational institutions, and the lack of adequate menstrual protection alternatives in terms of clean, safe, and private sanitation facilities for girls in schools

undermine girls' right to privacy, resulting in a fundamental infringement of their human rights (Patkar & Bharadwaj, 2004).

The manner in which a girl learns about menstruation and its associated changes may have an impact on her response to the event of menarche. Although menstruation is a natural process, it is linked with several misconceptions and practices, which sometimes result into adverse health outcomes. Several studies have reported restrictions on daily activities, such as not being allowed to take a bath, change clothes, comb hair, and enter holy places. Apart from these, dietary restrictions (taboo on the consumption of food like rice, curd, milk, lassi, potato, onion, sugarcane, etc.) during the menstrual period are also imposed. Along with cultural constructs which lead to the formation of certain preconceptions, the reaction to menstruation also depends upon awareness and knowledge about the subject. There is a substantial lacuna in the knowledge of menstruation among adolescent girls and there is a low level of awareness about menstruation among girls when they first experience it. Social prohibitions and negative attitudes of parents in discussing related issues have openly blocked the access of adolescent girls to the right kind of information, especially in rural and tribal communities.

"Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. It also improves sexual health, the purpose of which is the enhancement of life and personal relation, and not merely counseling and care related to reproductive and sexually transmitted diseases" (WHO, 1996).

The above definition of reproductive health contained in the programme of the International Conference on Population and Development (ICPD), Cairo, is an improved version of the World Health Organization's technical definition, which was accepted by the United Nations general assembly. It is being followed by government and voluntary agencies all over the world and also utilized as a functional definition for the present study.

Personal Hygiene for Adolescents: It is one of the basic components of the measures for protection to health. Adolescents should take care of personal hygiene, such as cleaning hands with soap thoroughly before and after taking the food and after going to the toilet, adolescent girls should use clean clothes pads or sanitary napkins during periods. They should change pads frequently and the part should be kept clean and dry. They may have a few Pre – Menstrual Syndrome (PMS) like irritability, sleep disturbance etc, for which they should not worry but follow the necessary diet, exercises to relieve from such PMS (Premenstrual Syndrome) and adolescent girls should contact doctor if they have any health problems without any hesitation. Family has a crucial role in shaping the adolescent behaviour. They, especially mothers need to be taught or inform them about good health behaviours in order to have the right growth and development. Family member's positive encouraging attitude, interaction with adolescents, giving correct information and clarifications on their doubts will surely help them to protect themselves from health problems, especially reproductive health related problems.

The health status of a population reflects a set of prevailing social, economic, and political conditions. Reproductive health is a right for both men and women. Today, gaps and failures in reproductive health care, combined with women's long-established inequality and the pressures of society and family, keep people all over the world from

exercising their sexual and reproductive rights. This massive denial of human rights causes the deaths of millions of people every year; many more are permanently injured or infected. Most of these people are women, and most are in developing countries. Reproductive decisions cannot be made in isolation but at products of interaction between various extraneous and internal factors like knowledge of family planning methods, attitude towards control of births, cultural practices adopted in marriage and consummation, health care of mother and children, dietary habits, health care services available and access to those which are important considerations. Informed reproductive decision making is also assuming responsibility for making rational choices. The capacity for making responsible and rational choices is acquired not by information and knowledge alone but more by opportunities and creation of appropriate conditions and contexts for reproductive decisions.

Need for Reproduction Health Services for Adolescent Girls: Due to peer group pressure, the influence of mass media, and ignorance, they face various problems such as abuse, unprotected sexual activity, unwanted pregnancies, and other risky activities. This has reinforced the need for adolescent Reproductive Health Care. Unsafe abortion also kills many adolescent girls in developing countries. Although it is illegal in most countries, many girls resort to abortion because they do not have access to contraceptive methods that would prevent pregnancy. In other cases, the method fails.

According to the findings from the Demographic and Health surveys, adolescents are more likely to die, too. To cope with the significant physiological, mental, and emotional changes during adolescence, the greatest needs of adolescents include education and counseling, especially related to their biological development and maturation, General

issues, Sexual abuse, Usage of contraceptive methods, STD (sexually transmitted diseases and AIDS (acquired immune deficiency syndrome), Abortion, and post – abortion care. The success of these services requires prevention, treatment, and follow up care.

Adolescent Pregnancy: According to 2013, the state of the world population report by the United Nations Population Fund (UNFPA), every day 20,000 girls under the age of 18 give birth and 95% of these pregnancies occur in the developing world. For these young women, the results can be devastating. They not only face increased risk of maternal death and other social pregnancy, which can limit their economic and other opportunities. "Adolescent pregnancy is a manifestation of inequity" – Dianne Stewart, UNFPA. Early pregnancy poses dual challenges. The nutritional requirements of pregnancy compete with a maturing body's need for nourishment during puberty. Furthermore, the birth canal and pelvic bone are not fully developed in a girl just entering her teens, making childbirth among very young women more difficult and painful and often permanently damaging. There are many risks associated with an adolescent pregnancy and the younger the mother-to-be, the greater they are. These include greater risks of pregnancy complications and potential long – term squeals arising from them, including the risk of infertility. Considerable anxiety may exist (particularly for the unmarried mother–to-be) with regard to the physical changes resulting from pregnancy, social disapproval, an interruption of schooling, loss of actual or future income and uncertainty of proper antenatal care.

The reproductive health thus includes a much wider area than only physical well-being. Reproductive health addresses the physical, social, emotional, and psychological dimensions of sex and reproduction and not just the presence or absence of disease of reproductive organs. The proponents of the reproductive health framework believe that

reproductive health is inextricably linked to the subject of reproductive rights and freedom. Also, the reproductive health concept extends beyond the narrow confines of family planning to encompass all aspects of human sexuality and reproductive health need during the various stages of the life cycle.

Adolescents whose environments change in developmentally regressive ways are more likely to experience difficulties. In contrast, adolescents whose social environments respond to their changing needs are more likely to experience positive outcomes. Adolescents who experience more negative family interactions may engage in more delinquent behavior ,which may increase family negativity, which, in turn, may result in higher rates of delinquency (Gutman and Eccles, 2007 and Rao et al, 2010).

1.4. Healthy Eating Habits of Adolescent Girls

The individual likes to endure a healthy way of life and efforts to do all possible to live by it. Healthy eating habits play an influential role for adolescent girls in a variety of ways. The advancements that they create in food determine which nutrients entre the body, healthy intake is more significant for livelihood. The development of nutrition intake preferences start at early childhood and proceeds over the entire life course. The choice of intake of nutrition is an outcome of a complex relationship between biological habits and environmental effects. Though in childhood, much of the healthy intake or food preferences occur, they continue to change during adolescence and adulthood (Ventura and Worobey, 2013).

Barooah (2012) observed that peer's influence among adolescents may lead to breakfast or meal skipping, which encourages them to eat non-nutritious foods like pizzas, burgers, coffees, chocolates, roadside junk foods, etc. The World Health Organization

2001/ 2002 survey of Health Behaviour for adolescents in 35 countries and regions established that consumption of fruits and vegetables was low around 30% of the young girls' daily consumed fruits. While in many countries, a similar proportion of adolescents drink sugared soft drinks daily (Vereecken et al., 2004). Adolescent girls' diets were found to be deficient in iron, calcium, dietary fiber and other nutrients.

There are around 239 million adolescents in India in the age group of 10-19 years. Over the next two decades, the number of adolescents is likely to increase further (Adolescents in India, 2003). Contributing such a large percentage to the total population, adolescents represent a resource for the future whose potential can either be wasted or nurtured in a positive manner (Nath and Garg, 2008). Adolescents are tomorrow's population and their health and well-being are crucial. Evidence indicated from both the developed and developing countries shows that the poor nutritional status of adolescent girls is a link between fatal malnutrition and increased risk of various chronic diseases during adulthood (WHO, 2006). Inappropriate dietary intake during adolescence can have several consequences, theses affect their physical growth and reduce intellectual capacity as well as delay sexual maturation. Unsuitable dietary intake upsurges the risk of immediate health problems such as iron deficiency, improper growth (underweight as well as overweight), stunting and low bone density.

The Adolescent girls, teen years are a time of rapid growth. They need extra nutrients to support bone growth, hormonal changes, organ, and tissue development, including the brain. The two main nutrients of concern for teenagers are calcium and iron.

- Adolescent girls should eat breakfast, drink water and limit highly processed food, sugary drinks and eating outside.

- Healthy eating habits and physical activity can help lower the risk of obesity.
- Correct Diet: Diet is recognized as the most important single factor for promoting either health or disease. Eating determines what and how we are certain about diet. Sir Robert McCarrison's prime nutritional law rightly reads: "The right kind of food is the most important single factor in the promotion of health, and the wrong kind of food is the most important single factor in the promotion of disease".

Along with physical changes, teens become more independent as they grow. Dietary options are one of the first decisions teens start making on their own. However, some teens tend to make poor food choices. Overall, teens tend to fail to meet their daily recommended amount of vegetables, fruits, and whole grains. In addition, teens often have an increase intake of highly processed foods or drinks that are high in sugar, sodium, and saturated fats.

Water is also important for active teens. Physical activity can make a teen dehydrated.

- Remember to keep drinking water even if you don't feel thirsty.
- Healthy eating tips for normal and overweight teens
- Increase intake of whole grains, vegetables and fruits.
- Enjoy regular physical activity.
- Eat three meals every day and enjoy snacks between meals.
- Include protein-containing foods in meals and snacks.
- Enjoy a variety of foods.
- Choose healthy snacks such as vegetables and fruits, or baked snacks.

- Prepare food at home using whole grains, vegetables and fruits.
- Limit foods high in sugar, sodium or saturated fat.
- Eat fast food and processed foods less often.
- Eat when you're hungry; stop when you're full.
- Pay attention to portion sizes.

1.5. Effect of Family and Social Environment on Reproductive Health and Healthy Eating Habits of Adolescent Girl

Adolescence is an important developmental phase along the path to adulthood, years during which youth become increasingly independent from their families. An individual's social environment, including the social relationships an individual makes within it, can also have a profound impact on the quality of parenting, which in turn affects health development and future achievements. Inclusive social environments which provide support to parents have been shown to enhance parents' capacity to care for their adolescent girls and in doing so, promote better development. They also have been shown to have a positive effect on the family system, and families who are well - connected to networks of supportive individuals are better able to cope with factors which may negatively influence their health. The social environment refers to an individual's physical surroundings, community resources, and social relationships.

The physical surroundings of a social environment including housing**,** facilities for education, health care**,** employment and open space for recreation. The nature of physical surroundings (including their quality, e.g. the extent to which open spaces are clean and buildings maintained) can influence the quality of parenting and in turn affect health and wellbeing.

Community resources, availability of community resources refers to community structures (e.g. political governance) and organizations, knowledge, and support within the community. The extent to which resources are available in the community influences the health of individuals living within it. Living in a socio-economically deprived, underdeveloped community, has a negative impact on the development of adolescent girls.

Social relationships are the interactions between various individuals or groups. In every society, individuals develop relationships with other individuals to enable them to achieve their goals. These relationships may be entered into consciously or unconsciously (e.g. a friendly chat whilst waiting in a queue or a meeting with a child's teacher). The obligations, expectations, trust and norms of any relationship influence the extent to which these relationships enable an individual to develop "social capital". Social capital is a strong, supportive network of individuals who provides access to emotional and physical resources which an individual needs to fulfill their goals. Social relationships are collectively referred to as the social network. Good social networks are associated with greater levels of social cohesion, informal care and enforcing healthy behaviours such as not smoking and safe sexual practices. Being physically, socially and mentally active can improve an individual's social environment and relationships cause them to feel more involved in their community.

The local family and social conditions exerts extra pressure on the adolescent with negative reproductive health consequences. There is an urgent need to develop a time-bound strategic framework and plan to redress this situation. This will require the participation of all stake holders (Okonta 2007).

Healthy Eating Habits for adolescent girls is something that should be formed at an early age to ensure that they lead a better way of life in future. Adolescent girls want to make their own food choices and they buy the food as per their directions; they may even like to prepare of their own food. While the parents can set a good example for them, parental influence is much weaker at this stage. This may be due to certain factors that influence at adolescent girls healthy food intake selection and consumption including the desire to be healthy, fitness, easy access to money, social practices, media, and peers. Adolescents enjoy spending money on food and making their own selection (O' Dea, 2003).

1.6. Need for Guidance and Counseling to Adolescent Girls

Adolescent's counselling is aimed at young people to help them make sense of their feelings, behaviors and thoughts and entails the use of unique techniques that draw out the expressive nature of a young person like art therapy or more traditional approaches like talking therapy. This form of counselling is important in helping and guiding kids transitioning into adulthood and to understand them better.

1.6.1. The Importance of Adolescent Counselling

Any parent can attest to the fact that the adolescence stage of any child can be extremely difficult and confusing. With fluctuations in mood, your youngster could be happy one minute and mad the next. Often, during this stage, most adolescents feel as though their parents are pressuring them and just want space. That is why most kids tend to withdraw when they reach their adolescence and don't want much to do with their parents.

During this period, they also become more aware of their bodies and their sexuality. As a result, they tend to want to make new friends and experiment with new things. It is a confusing time, so parents need to monitor and supervise to ensure teenagers do not end up making wrong life decisions.

Adolescent counselling is not only for adolescents with personality or behavioral issues, but it is for any child undergoing adolescence that may be confused or overwhelmed. While it is important that adolescent girls with issues related to their adolescence undergo counselling, this form of therapy is crucial for any young adult as it could help them understand the changes they are going through and who they are becoming, as it addresses basic aspects pertaining to adolescence.

1.6.2.Guidance about Menstrual Hygiene

Access to safe and dignified menstruation is a fundamental need for women and girls. UNICEF envisions a world where every girl can learn, play, and safeguard her own health without experiencing stress, shame, or unnecessary barriers to information or supplies during menstruation. Meeting the hygiene needs of all adolescent girls and women in all settings enables human rights, dignity, and public health.

A growing evidence base from low- and middle-income countries shows that many girls are not able to manage their menses and associate hygiene with ease and dignity. This deprivation is even more acute for girls and women in emergencies. These girls and women cannot practice good menstrual health and hygiene at home, at school, at work or in other public settings, due to a combination of discriminatory social environments, inaccurate information, poor facilities, and limited choice of absorbent materials. Public infrastructure and policies in health, WASH, and education under-priority and under resources menstrual

hygiene, support, and knowledge. In addition, myths and taboos often promote a high level of secrecy about even the most basic menstruation facts – leading to shame and exclusion for women and girls. Inaccessible WASH facilities, access to information and materials are barriers for women and girls with disabilities managing their menstruation hygienically and with dignity.

Menstrual hygiene management (MHM) refers to the management of hygiene associated with the menstrual process. WHO and UNICEF Joint Monitoring Programme (JMP) for drinking water, sanitation, and hygiene has used the following definition of MHM: 'Women and adolescent girls are using a clean menstrual management material to absorb or collect menstrual blood, that can be changed in privacy as often as necessary for the duration of a menstrual period, using soap and water for washing the body as required, and having access to safe and convenient facilities to dispose of used menstrual management materials. They understand the basic facts linked to the menstrual cycle and how to manage it with dignity and without discomfort or fear.

Menstrual health and hygiene (MHH) encompasses both MHM and the broader systemic factors that link menstruation with health, well-being, gender equality, education, equity, empowerment, and rights. These systematic factors have been summarized by UNESCO as accurate and timely knowledge, available, safe, and affordable materials, informed and comfortable professionals, referral and access to health services, sanitation and washing facilities, positive social norms, safe and hygienic disposal and advocacy and policy.

A menstruator is a person who menstruates and therefore has menstrual health and hygiene needs – including girls, women, and transgender and non-binary persons.

Menstrual hygiene materials are the products used to catch the menstrual flow, such as pads, cloths, tampons, or cups. Menstrual supplies are other supportive items needed for MHH(Menstrual Health and Hygiene), such as body and laundry soap, underwear, and pain relief items. Menstrual facilities are those facilities most associated with safe and dignified menstruation, such as toilets and water infrastructure.

Globally, there is growing attention to menstrual health and hygiene in the developmental and humanitarian communities. UNICEF is helping to lead this expansion, with an increasing number of country offices reporting menstrual health and hygiene (MHH) activities in both their development and humanitarian programmes. And MHH has been approved by UNICEF's Executive Board as one of UNICEF's five core priorities for adolescent girls in its Gender Action Plan (2018-2021), with specific targets in the Strategic Plan covering the same time period. Improving MHH has become a central part of UNICEF's commitment to ensure that girls grow up healthy and reach their full potential. For both adolescent girls and women, UNICEF commits to programming that strives to increase confidence, knowledge, and skills – and improve access to materials and facilities – for them to manage their menstruation safely and with dignity. UNICEF works to improve girls' and women's menstrual health and hygiene in four areas: social support, knowledge and skills, facilities and services, and access to absorbent materials and supportive supplies.

1.7. Significance of the Study

Adolescent girls are not properly informed about sexuality, dietary intake, menstrual hygiene and reproduction, especially in India and most countries in the world. Generally, adolescent girls prioritize livelihood skills and opportunities as very important to

them and do not worry about life skills and opportunities. This become the major cause for sexual violence and abuse. The girls should be made aware of the use of contraceptives and reproductive health. So all adolescents need support and care during this transition to adulthood and some need special help. Women, especially adolescent girls, are more liable to various complications and dangers that result from reproductive system functioning and diseases.

Adolescent girls have the right to be informed about these health issues. In order to protect them from various complications related to reproductive health, it becomes necessary to give full and reliable information through reproductive health education and counseling. Counseling or Education should comprise of counseling on sexuality, pregnancy, abortion, infertility, contraceptive usages, infections and diseases, prevention, examinations, and treatment of such diseases, including HIV or AIDS care before and after child birth and issues related to menopause. This would surely help us to create a healthy world with empowered adolescent girls.

The study is set in Vijayapura District of Karnataka state, one of the state districts in 28 states of India, situated 526.3 kilometers to the north of the capital of Karnataka called Bangalore. The district covers an area of 98.73 square kilometers. The district is bounded by Solapur district to the north and Sangli district to the north-west, Belgaum district on the west, Bagalkot district to the south, Gulbarga district to the east and Raichur district to the south-east.

This research would help social workers in understanding the issues related to the reproductive health and healthy eating habits of adolescent girls. It would help in

raising sensitization among social workers about the different problems encountered by adolescents in getting information on reproductive health and nutrition related issues. It would highlight the need to make the existing college health service more sensitive to the needs of adolescents. This would enable social work professionals to bridge the gap between the adolescents and adults (parents and teachers) who continue to be the main and easily accessible source of information, especially in the area of reproductive health education for adolescent girls. The onset of adolescence is a critical period of biological and psychological change for the individual. Today society is changing rapidly. Human relations in this modern world are losing their values. Due to a small family and work, many parents do not spend time with their children.

1.8. Concept of Social Work

Social Work approach is a unique among all helping professions because it focuses on people's problems in context of their social environment. In 1869 Octavia Hill and Samuel Barnett were started the London Charity Organization Society (COS), introduced a system of friendly rent collects as a method of improving slum housing through the volunteers. Next the United States of America main three social movements started the Charity Organization Societies (COS) in 1877 at Buffalo New York, The Settlement House Movement started 1886 in New York city, The Child Welfare movement started in 1853 at New York city. These are the main base in social work. The Amsterdam institute of social work training the first school of social work started in 1899 at Netherland. University settlement recognized in 1887 in London through women's graduates of Oxford and Cambridge. The training pioneered through group evolved in organized courses, and ultimately in to professional education for social work. In 1903 started the Chicago institute of social sciences and 1920 it was renamed as the University Of Chicago School Of Social

Service called the first autonomous graduate school of social work in University (Rai Technology University).

Professional association came from social work specially like the American Association of Social Workers (1918), the National Association of School Social Workers (1919), the Association of for the study of Community Organization (1946), and the Council of Social Work Education (1952). Many social organizations merged in 1955 from the National Association of Social Workers (NASW). The first training course for social work as stated in India through University Grants Commission was organized through Social Science League in Bombay in 1920. The first professional institution started in 1936 the Tata Graduate School of Social Work established by sir Dorabji later renamed as Tata Institute of Social Sciences. The University Grants Commission appointed the first Review Committee for social work in 1960, the second Review Committee in 1975, and the third Review Committee in 2001 for the promotion, maintenance of standard of education, coordination of social work education, training, research and practice. These associations and councils build professional development in social work. The profession of social work is recognized itself in various countries, social workers practices in a several settings: hospitals, mental health, community centers, schools, social service agencies, employment setting, courts, and correction.

Social work is to help people so that they develop the capability to deal with their troubles through themselves. Social work is science and art, in the science that the knowledge taken from various theoretical base for helping people that bring for practice. The methods of social work will help the professional social worker to understand methods of helping people. The effective social work methods are:

- Social Case Work

- Social Group Work
- Community Organization
- Social Work Research
- Social Welfare Administration
- Social Action

The first three are recognized as direct helping methods and the last there are secondary methods, these six social work methods are systematic and planned methods for helping people in specially for the adolescent girls.

Social case work deals with the individual's problems specially in the situation he/she unable to deal with themselves. Because of it was not hi/her control, mental condition was unstable, incapable to solving it. The case worker gets the information connected with the clients total environment, discovers the causes, prepares a treatment plan with professional connection tries to change in the perception and attitudes of the client.

Social group work is a social work service in which a professionally qualified person helps individuals through group experience to help them towards improved relationships. In group work individuals are significant and they are helped to improve their social relationships with flexible programmes, giving importance to the personality development of the individual and group.

Community organization is another method of social work. It is a procedure through which a systematic effort is made to improve the relationships in a community. Identifying the problems finding out solving the community problems and developing the social relationships.

Social welfare administration is a procedure through which social work services both private and public, are organized and administered. Developing programmes, proper

organization, coordination, providing skillful and systematic leadership, guidance and supervision of the staff, mobilizing possessions, budgeting and financing of the programmes these are the functions of social workers in administration.

Social work research is a systematic investigation for finding out new facts, test old hypothesis, verify existing theories, a systematic study of the given situation is necessary through the social work research.

Social action is to bringing in relation to the desirable changes to ensure social progress. Creating awareness in relation to the social problems, mobilizing possessions, encouraging dissimilar section of people to raise their voice against undesirable of practices, social workers using the method of social action. Following are the principles of the social work such as;

- ✓ Principle of Acceptance
- ✓ Principle of Individualization
- ✓ Principle of Communication
- ✓ Principle of Self – Determination
- ✓ Principle of Confidentiality
- ✓ Principle of Non- Judgmental Attitude
- ✓ Principle of Controlled Emotional Involvement (Rai Technology University)

Adolescence is the last phase before adulthood. Therefore, it offers parents, teachers, and health professionals an opportunity to educate a child towards his adult responsibilities. Social Work practice involves not only intervening with adolescent girls, but also with their families, educational institutions and environment where they live. It is difficult and challenging to work with adolescent girls who are at risk of emotional or to confront adversity, develop mechanism that promote resiliency. The indulgence and

endorsement of reproductive rights are essential in the Social Work profession. It is not only improves the health status of affected populations ,but also advocates effectively for social justice and to respond to globalized realities (Alzate, 2009). This study helps to find out the knowledge, practice, and attitude of reproductive health and knowledge, practice and attitude of healthy eating habits in social work prospective.

1.9.Theoretical Framework

The theoretical perspectives on adolescents and adolescence enlighten that adolescence is often described, as an exciting transitory phase in the human life cycle but is perhaps one of the most challenging stage. This is a time when adolescents evolve into adults with newly discovered independence and renewed responsibilities. They are constantly in search of their own new identity. They tend to question and appreciate the values of the adult world and try to assert their existence. During adolescence, they develop skills that will help them to grow into caring and responsible adults. When adolescents are supported and encouraged by caring adults, they thrive in unmanageable ways, becoming resourceful and contributing as members of their families and societies.

Sigmund Freud (1905): Developed psychosexual theory of development**.** He believed that a lot of vital pressure during adolescence, mainly increase in sexuality, this leads about appearance of the oedipal situation, which must be determined over attraction towards opposite sex peers. Sometime, an increase in sex drive leads to stress mainly fear of opposite sex and fear of affection in sexual ventures. Using the defense mechanisms which helps in avoidance of opposite sex and may reduce the anxiety. Frequent use of these mechanisms might influence to inadequate interpersonal relationships and it affects in personal growth and increase in social distance between the individual and others.

Anna Freud (1948): Developed theory of Adolescent Defense Mechanism. Anna Freud assigns greater importance to puberty as a critical factor in character formation.

Robert Havinghurst (1972): Havighurst developed the concept of developmental tasks. It stands between basic needs and the theory of determination of the needs of adolescents and society. The developmental tasks are inescapable requirements imposed by the person himself or by society. It means that adolescents must possess or acquire an acceptable level in certain kinds of competencies according to their ability.

Havighurst points out that any particular developmental task becomes appropriate for an individual when one or more of the following characteristics have developed. It changes with the socio-economic development of the country and can be replaced by new developmental tasks suiting the needs of the individual and the society.

Following are the developmental tasks to adolescents;

i. Acquiring a set of values as a guide to behavior
ii. Desiring and achieving socially responsible behavior
iii. Developing new and matured relations with age matters of both sexes
iv. Achieving a masculine or feminine role
v. Developing intellectual skills for success in the examination
vi. Selecting suitable courses for preparation for an occupation
vii. Using the body effectively
viii. Preparing for marriage and family life
ix. Achieving emotional independence of parents and adults
x. Achieving assurance of economic independence

Believed the developmental tasks of each specified stage are succeeding in nature, every task is an essential for every successive task. The significance of individual developmental tasks is different between early, middle and late phases of the transition (Ingersoll). This

developmental task model assumes for adolescents that overcome these tasks as well as healthily adjusted with socialized adult.

Mead (1953): Adolescence is a period of searching a meaningful identity. To find their identity in young people, which usually clarifies the out mode and compare the behaviour and values among parents and models provided by the mass media. It is a period where adolescents maintain and exchange ideas in the value system of their peers rather than their parents.

Abraham Maslow (1954): Proposed the self - actualization theory, which recommended that a motivational behaviour may satisfy many needs. The needs can be arranged from the lowest to the highest development of the personality, "a hierarchy ascending from basic physiological needs like hunger and desire through love and esteem and ultimately self - actualization. This theory explains human motivation, an individual can actualize his potentialities and strive to do what they are capable of doing. Both maximizing ability and effort to experience capability are important goals in education. Maslow delivered reproductive choices as the basic impulsion towards healthy development and motivation for better performance. To find a good decision, the primary requirement is knowledge and education that can be found among all students that they all have needs (manju, 2012).

Alferd Adler (1912): Adler developed the concept of individual psychology. He noticed styles of life in dealing with feelings of inferiority ensuring from individuals and social development. Adolescence is very important phase which developing ways of life and physiological changes. Reproductive health knowledge would engrave a dependable and responsible adult efficient in practicing individual rights out of a curious adolescent.

Erik Erikson (1968): Highlighted the addition of ego identity and the cultural element of development. He viewed psychosocial stages, that are part of biologically ascertained, related with each of his eight stages of development which is a psychosocial task that is experienced. Every crisis comprises conflict and has two likely outcomes.

Erikson considers that there is a disintegration of identity during adolescence from physical and social factors (such as increasing importance of making decisions related to education and preparation for future occupations) that pressurize the adolescent to deliberate alternatives. He noted the value of developing a vocational identity and a personal philosophy, which to prepare adolescent to with regard for evaluating and coping with life events; on the other hand, the adolescent may not be efficient at making a systematic and adequate identity, leading to individual - difficulty, role confusion, and indulgence in self destruction activities such as juvenile delinquency or personality deviation.

Muuss Rolf. E. (1975): He introduced the theories of Adolescence , adolescence is a mode of attempting freedom and freeing from dependency on parents. Mainly, their reactions are influenced and motivated by their peers. They do not accept the value system of parents and give concerned to their age mates.

Jean Piaget: Adolescence is the stage when a person attains maturity in physical development in respect of sexual behaviour, and also cognitively. From eleven years onward, Jean Piaget considers it to be the stage of formal operations when the growing adolescent starts thinking logically and persistently. Personal Hygiene for Adolescents; It is one of the basic components with respect to measures for the protection of health. Adolescents should take care of personal hygiene, such as cleaning hands with soap thoroughly before and after taking food and after going to toilet, should take bath daily,

should use clean clothes pads or sanitary napkins during periods. They should change pads frequently and the parts should be kept clean and dry. They may have a few Pre - Menstrual Syndrome (PMS) like irritability, sleep disturbance etc for which they should not worry but follow the necessary diet and exercises to relieve from such PMS and adolescent girls should contact doctor if they have any health problems without any hesitation. Family has a crucial role in shaping the adolescent's behaviour. They, especially mother must teach or inform them about good health behaviours in order to have the right growth and development. Family member's positive encouraging attitudes, interaction with adolescents, giving correct information, and clarifications on their doubts will surely help them to protect themselves from health problems, especially reproductive- health related problems.

All these thinkers, analysts, and psychologists mentioned above have provided essential knowledge, views and ideas about the adolescent girls' related concepts in human development and also helped in scientific study. The researcher took the initiative to carry out a descriptive study to look after the adolescent girls' reproductive health issues, healthy eating habits including the knowledge, practice and attitude which raise the opinion of parents and teachers on imparting reproductive health. The present study was also an attempt to study the need and importance of guidance and counselling with respect to reproductive health education and healthy eating habits for adolescent girls.

Since there is an inadequate information related to family and social environment on Reproductive Health (menstrual hygiene, reproductive health problems) and Healthy Eating Habits among adolescent girls in Vijayapura district of Karnataka, this study will identify issues relevant to the knowledge, practice, attitude, social factors, health factors , and challenges of Reproductive (menstrual hygiene) Health, and Healthy Eating Habits

among adolescent girls. The study also intends to identify necessary actions to be taken at local and national levels, through which the reproductive (menstrual hygiene) health problems of adolescent girls can be addressed. At least in the long term, reproductive health problems of girls in rural Vijayapura district of Karnataka may be diminished by these actions. It is also hoped that the findings from the study will generate further interest in the research field of reproductive health and menstrual hygiene in the context of rural Vijayapura district of Karnataka.

1.9 Chapterization

Chapter–I : Introduction: Introductory part deals with meaning, significance and theoretical explanation, profile, the present situation of the study population, health aspects and various welfare schemes meant for them.

Chapter–II: Review of Literature: The review of various literature at all levels related to research area is taken up for the study.

Chapter–III: Research Methodology: This chapter explains the methodology used for the study.

Chapter – IV: Geographical Profile of the Vijayapura District: This chapter explains about the socio-economic profile of the Vijayapura district.

Chapter – V: Data Analysis and Interpretation: This chapter discusses the findings as per analysis and interprets the collection of data on the basis of objectives.

Chapter–VI: Findings, Suggestions, and Conclusion: The last chapter describes the concluding part with summary and conclusion.

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CHAPTER II

REVIEW OF LITERATURE

2.1 Introduction

A literature review is a body of text that researcher attempts to review the critical points of current knowledge, including substantive findings as well as theoretical and methodological contributions. In this chapter, an attempt is made to review the literature directly and indirectly related to the present research problem. The reviewed literature is classified and presented in five headings in order to understand the gaps in the existing knowledge.

- Studies on Major Features of Adolescent Girls
- Studies on Reproductive Health
- Studies on Healthy Eating Habits of Adolescent Girls
- Studies on Effect of family and Social Environment on Reproductive Health and Healthy Eating Habits of Adolescent Girls
- Studies on Need for Guidance and Counselling

2.2 Need for the Review of Related Literature

Besides being a foundation for qualitative research, review of the related literaturepermits the researcher to acquaint himself with current knowledge in the field or an area in which researcher is going to conduct research. As such, a careful review of literature related to the problem to be investigated is an important step in social work research.

Review of related literature serves the following purpose:

i. It shows whether the evidence is already available to solve the problem adequately without further investigation. In such a case, the review helps to avoid unnecessary duplication. However, if the researcher is not satisfied with the procedures followed by the previous researchers in solving the problem, the researcher can conduct the study using innovative, alternative or refined procedures.

ii. Review also tells the researcher about what has been done, found and accepted, further helping in what is to be done. Thus, it will be of immense help at the stage of 'finalizing the selection of the problem for research'.

iii. It provides new ideas, concepts, theories, explanations, or hypotheses valuable in formulating the problem. It is useful in defining and delimiting the problem in terms of objective questions and hypotheses. Thus,it is quite useful at the stage of 'formulating the problem'.

iv. The review suggests the research methodology is appropriate to the selected problem. Through the review, the researcher will come to know the methodology used by the previous researchers. This helps the researcher to select a method(s) of research appropriate for his study.

v. It suggests data gathering tools and techniques appropriate for the study. The review helps the researcher with knowing about data gathering devices used by the previous researcher and for similar related studies in the field. This knowledge helps him to select or construct appropriate data gathering devices and tools for his study. Thus, the review is found to be quite useful at the stage of 'selection and construction of tools for the collection of data'.

vi.Review of related literature suggests the statistical techniques appropriatefor the analysis of data since the researcher will be acquainted with the statistical techniques used by the previous researchers in their studies.

vii. It also helps the researcher in the formulation of conclusions and generalizations.

viii. Review of related literature helps in knowing about the recommendations of previous researchers for further research which they have listed in their studies. It contributes towards the general research competency of the researcher. The researcher who does a thorough review of literature develops confidence in planning and conducting research. (O. R. Krishnaswami 2015).

Thus, it is seen that the review of related literature is useful at all the stages of research, right from the selection and formulation of the problem through its planning and implementation till the writing of the report.

In the present study, major features of adolescent girls, reproductive health, healthy eating habits of adolescent girls, the effect of the family and social environment on reproductive health and healthy eating habits of adolescent girls, and the need for guidance and counseling are reviewed in this chapter.

2.3 Studies on Major Features of Adolescent Girls

Physical changes,either glandular or hormonal changes are responsible for physiological changes. The increased output of gonadotropic hormones of the anterior pituitary gland located near brain, governs and controls the hormone balance in the body. It stimulates the sex glands for increased production of sex hormones - sperms in males and ovaries in females. The sex hormones testosterone in male and estrogen in females in a combination of other hormones stimulate the growth of bone and muscle. Growth spurt during puberty is strikingly visible as height and weight increase to the noticeable level within short time span. But, even for perfectly normal children, the increase varies widely with respect to intensity, duration, and more importantly the age of onset from one child to another.

Hyde (1990) stated that there are four major body changes that occur at puberty; cross sectional study was conducted aged group of 14-18 years. Random sample selected, 467 adolescent girls collected the data. changes in body size, changes in body proportions, development of the primary sex characteristics and development of the secondary sex

characteristics. Growth is far from complete when puberty ends, nor is it entirely complete at the end of early adolescence. Found that poor awareness regarding puberty changes during the adolescence period. Suggested that there is need of importance of health and physical changes for adolescents that can know in better way.

Fenwick *et al.* (1994) described the milestones in adolescent development. According to them, during early adolescence (11-14 years), concern about appearance increases, independence from family becomes more vital, rebellious/defiant behaviour can be seen, importance of friends and peer group increases and ego dominates among all issues.

Differences in the timing of pubertal change from one adolescent to the other, or within any adolescent, are collectively known as asynchrony. For adolescents, who believe changes should occur together, the fact that they have not or occurred together but at the "wrong" time, can have enormous implications on their personal disposition. The Berkley research found that boys who mature early appeared more adult and more attractive to their peers and adults than late mature. Early mature were more self-confident and less dependent compared to late mature who are anxious and scared of rejection by peers.

Clemesand **Bean (1999)** have defined the following four conditions that must be fulfilled in order for a high sense to be developed and maintained:

- Consecutiveness, that results when a child gains satisfaction from associations that are significant to the child and the importance of these associations have been affirmed by others.
- Uniqueness, that occurs when a child can acknowledge and respect the qualities or attributes that make him or her special and different and receives respect and approval from others for these qualities.
- Power, that comes through having the resources, opportunity, and capabilityto influence the circumstances of his or her own life in important ways.

- Models that reflect a child's ability to refer to adequate human, philosophical and operational examples that serve to help him or her establish meaningful values, goals, ideals, and personal standards.

Hardin (2002) observed that self-esteem plays an apparent role in the loss of virginity among adolescents. Self-esteem had opposite effects on young girls and young boys. Young girls with high self-esteem were less likely to engage in early sexual activity, where as young boys with high self-esteem were more likely to report being sexually active. They concluded that high self-esteem had the opposite influence on girls, who reportedly were three times more likely to remain virgin than girls with low self-esteem.

Robert Crosnoe, and **Monica Kirkpatrick Johnson (2011)** reviewed that covers the state of contemporary research on adolescents' physical, psychological, interpersonal, and institutional pathways; how these pathways connect within primary ecological contexts; and how they relate to broader patterns of social stratification and historical change. Looking forward, it also emphasizes three future challenges/opportunities, including efforts to illuminate biosocial processes, link adolescence to other life stages, and account for the influence of major social changes.

Sharma Renubala*et al.* (2012)conducted a study on 120 adolescent girls aged between 13-19 years to draw up the pattern of physical growth and their nutritional status. Analysis of the study shows that between 13-14 years old girls, get the maximum weight in their lives. In comparison, the reference value of the NCHS weight of adolescent girls was low because of their poor nutritional status. Majority (68.34%) of adolescent girls were under-weight, only 0.83% were over- weight, while 30.83% were normal. According to the study, thinness was significantly higher in early adolescence than in late adolescence. In conclusion, the high incidence of current severe form and moderate form of malnutrition indicates a lesser intake of essential nutrients in food, which is associated with their low socio-economic status.

Bhavana Langer et al. (2015) examined that menstruation starts with puberty,which is experienced by every young adolescent girl. The aim of the study was to extract awareness and knowledge about menstruation among rural adolescent girls and its influence on demographic menstrual attitudes. The study revealed that 59.9% of adolescent girls are aware of menstruation and their attitude towards menstruation is considerably affected by

awareness and knowledge of menstruation. The majority of respondents received information from their mothers.

Wheeler*et al.* (2016) conducted the review based to evaluate the effectiveness for improving adolescent health and wellbeing. Opined that, in general, boys have more positive body image than girls. Girls tend to be critical of the way they look, believing themselves to be heavier than they are and wanting to be thinner. Boys, on the other hand, are content with their appearance, wanting, if anything, only to be somewhat more muscular. Girls' tendency to overestimate their weight declines after mid adolescence; however, their dissatisfaction with their bodies continues to increase through late adolescence. Researcher summarized and suggested that the effective interventions based related to health well being include sexual and reproductive health is needed for adolescents.

2.4 Studies on Reproductive Health

Adolescence is a period of childhood when there is a growth spurt towardsthe maturation of the reproductive system. The International Conference of Population Development (ICPD) held in Cairo in 1994,recommended,among other things, focusing on the adolescent and suggested the development of an integrated approach to their reproductive health needs.

Kissling (1996) Used the methods of critical, feminist analysis and examined social texts of menstrual socialization and girls opinion and conversation about menstrual education. also supported that none of the girls felt that they lacked scientific and institutional knowledge about menstruation but they all realized the need for more practical, personal menstrual knowledge which they gained from mothers and friends. These two kinds of knowledge did not seem to integrate well even after girls experienced their first period. Collected the respondents mothers ideas about preparation for menstruation. Suggested there is transformative language and action to teach girls about menstruation helps them to clear dualisms.

Jane Hughes and **Ann P. McCauley (1998)** conducted a study in family planning, improving the fit: adolescents' needs, and future programs for sexual and reproductive health in developing countries. Demand is growing in developing countries for sexual and reproductive health programs for young people. However, little scientifically based

evidence exists about which program approaches are most effective in shaping healthy behaviors. Careful evaluation and research must be increased, but meanwhile, planners need guidance as they expand programming. Research indicates that current programs often do not match the needs and health-seeking behaviors of young people. Behavioral theories and expert opinion agree that adolescents must be taught generic and health-specific skills necessary for adopting healthy behaviors. Constraints on financial and human resources, coupled with the great size of the youth population, highlight the need to find less costly ways to reach young people. These observations generate programming principles to help planners and communities experiment with a wide variety of programming approaches.

AbioyeKuteyi (2000) conducted a study to assess the level of knowledge and practices of menstruation among 352 randomly selected school girls in Nigeria. It revealed that out of 352 respondents, 53.1 percent had attained menarche and 40 percent lacked knowledge about menstruation. Although menstrual knowledge was higher in post-menarche girls, 10 percent of these were totally ignorant about menses and 84 percent were not psychologically prepared for the first menses. There was strong evidence that girls' menstrual knowledge was positively associated with parental education. The major source of menstrual information was the family. The mean duration of menstrual flow was 3 - 7 days (95.2 percent) of the study population. Even though the girls had adequate knowledge, there was an acute need for providing psychological education to girls with regards to menstruation well ahead of menarche.

Nagarajan (2003) conducted to estimate the prevalence of anemia among adolescent girls. A cross sectional study was conducted, 347 adolescent girls data was collected in CBSC schools of north Karnataka. Found that knowledge and attitude levels of different groups of college-going adolescents regarding reproductive- health education was similar and comparable in nature in pre and post-study. The knowledge gained through learning from self-instructional materials on adolescent reproductive - health education among the different groups of college- going adolescents was taking place significantly and uniformly. The results showed that 44.4% of respondents are anemic, suggested that the awareness about anemia and reproductive health must be created in schools.

Olayiaka O. and Akinyinka. O. (2004) have studied the qualitative approach of need for sexuality education among adolescent girls in southwest Nigeria. Taken 75

participants with ages ranging from 7-21 years. The results found that the late adolescents foused on coping with relationships and demands for sex, the early and middle adolescents focused on their feelings, relationships, menstruation and breast size, those n childhood (7-11years) appeared totally not aware about their body, and also the researcher opined that the misconceptions were identified in all age groups. Suggested that Christian and other religious groups should work with health educators to develop the teaching guidelines that focus on concerns of the youth.

Ogunlayi, M.A. (2005)conducted an assessment of the awareness of sexual and reproductive rights among adolescents in South Western Nigeria. This study, conducted in Ikeja and Ikorodu Local Government Areas of Lagos State, examined the awareness of sexual and reproductive rights among adolescents in south-western Nigeria. A total of 600 in-school and out-of-school adolescents were interviewed using quantitative and qualitative methods. The study revealed thatthe majority of the adolescents were aware of sexual and reproductive health rights (60.3% in Ikeja LGA and 62.3% in Ikorodu LGA) but lacked knowledge of the contents of the rights. Majority of them in various categories (by school condition and type of settlement) were not aware of sexual and reproductive health programmes being implemented for adolescents. In addition, those who were aware of such intervention programmes could not access or use the services due to certain socio-cultural barriers. The study recommends formulation of appropriate intervention strategies and programmes for adolescents, so that they may be aware and knowledgeable of their sexual and reproductive rights.

Seifu,A.,Fantahun, M.,Worku, A. (2006)reproductive health needs of out-of-school adolescents: A cross-sectional. Early and unprotected sexual activity and misconceptions about HIV/AIDS were found to be prevalent in the study population and rural out-of-school adolescents are at the greatest risk of sexual and reproductive health problems. In this era of the rapid spread of HIV/AIDS, high mobility and the ever increasing interaction between rural and urban populations, appropriate programs to prevent HIV/AIDS and promote reproductive health should be designed for out- of - school adolescents and rural out -of - school adolescents need the utmost attention.

Adhikari*et al.* (2007) conducted a study among adolescent girls to evaluate the knowledge and practice of different aspects of menstrual hygiene in Nepal. 151 adolescent

girls from the age group of 13 - 15 years were randomly selected for this purpose. The findings of the study showed that girls followed improper menstrual practices. Only 6.0 percent of the girls knew that menstruation is a physiological process; 36.7 percent knew that it was caused by hormones. About 94 percent of them used sanitary pads during the period but only 11.3 percent disposed of them.

Somnath Roy et al. (2007) conducted a study of comprehensive health care including sexual and reproductive health of adolescents and youths. This study found the various problems associated with growth up of adolescents such as cultural practices, gender disparity, and environment. Several problems occur in the development of adolescents and its impact on environment and cultural practices, young adults must be allowed to understand the environment of families, communities and schools. Suggested that combined interventions like health, education and life skill development would be imporatant. Young youths must create the supportive environmental with their families, schools and communities. Healthcare for adolescent should cover general health.

Jejeebhoy, S., (2007) conducted a study on reproductive health Reproductive Health and found that it has got crucial changes which immensely disturbing the level of mother mortality, overlay of STDs, endurance of vast gender inequality, and HIV. This study revealed that the status of Bihar and Jharkhand women was worst as they marry early, there is lack of awareness and less practice of contraception and pregnancy care. Majority of unmarried college -going youths and migrant males had involved in unsafe sex and reproductive consequences. Unmarried young people have little attention as a vulnerable group with distinct needs. Researcher highlighted the population of young people, married young women constitute a group with distinct risks of HIV/AIDS and making informed sexual and reproductive health decisions.

Poureslami*et al.* (2008) conducted a cross - sectional survey among girls in suburban districts in Tehran to assess the level of knowledge, attitude and practice of dysmenorrheal and menstrual hygiene. 250 girl students were selected using random sampling techniques. The study shows 77 percent of the girls had enough knowledge about dysmenorrheal and 32 percent practiced personal health behaviour such as taking baths and using hygienic materials. About 33 percent of the students avoided physical activities and exercises during the menstrual period. The prevalence of dysmenorrhea in this study was 71%, further, the

study revealed that there was a significant difference between students in different age groups regarding the effectiveness of appropriate diet and menstruation pain. Suggested girls who randomly received sanitary pads were number of less so they miss school during period. There is better menstruation products to close the attendance gap.

Oster*et al.* (2010) have conducted a cross-sectional descriptive study to determine the prevailing knowledge and experiences of menstrual hygiene, management, and implications in the daily lives and routines among adolescent school girls in rural and urban settings of Nepal. The survey was conducted among 204 school girls. The study shows that the respondents had attained menarche between 10 and 16 years and the mean age of menarche was 13.3 years. This study concluded that knowledge and perception about menstruation and hygienic practices were very poor among the adolescent girls in both rural and urban areas of Nepal.

Malleshappa.K.,and **Krishna. S. (2011)** studied knowledge and attitude about reproductive health among rural adolescent girls in Kuppammandal, adopting an intervention study. This study evaluated the effect of health education by health professionals on adolescent girls' knowledge and attitudes towards reproductive health. Remarkable improvement was seen in relation to the knowledge of participants about puberty, menstrual cycle, pregnancy, contraception and also transmission and prevention of STDs. Various studies have shown the effectiveness of intervention in increasing the knowledge of reproductive health. Studies conducted in developed countries also showthat girls have good knowledge regarding how to use contraceptives to prevent unwanted pregnancies. The study indicates that adolescent girls in rural areas are still ignorant about many aspects of reproductive health, especially regarding contraceptive methods. The findings of this study regarding awareness of girls about contraception concur with the findings of some of the other Indian studies. Similar findings have been noted in other developing countries as well.

A comprehensive adolescent reproductive health program can provide the right information at the right age. Teachers in schools and colleges often find it difficult to discuss the topics related to reproduction. It is commonly observed that they ask students to read these topics on their own from the text book. They are often unable to break the barrier

of hesitation. Parents' position in this regard is more sensitive. They also lack the confidence and skills to address the psychosocial and sexuality - related problems of adolescents. Reproductive - health education by a health professional has become acceptable for adolescent girls in urban areas. However, acceptability in rural areas and among non-school going adolescents need to be ascertained before universal application of the proposed reproductive health education package. Intervention in the form of health education increases the awareness level among adolescent girls especially in rural areas like Kuppam where the majority of them belong to a low socio economic status, thus empowering them to take care of their own health as well as protect themselves from possible health problems like unwanted pregnancies and risk of STDs in their future lives.

Subhas*et al.* (2011) in their community- based cross- sectional study, attempted to assess the knowledge and practices of menstrual hygiene among rural and urban school girls in Nagpur District, India. The objective is to assess the knowledge and practices of menstrual hygiene among rural and urban school going adolescent girls. The scholars have purposively selected 87 girls from 8^{th} and 9^{th} standards using the questionnaire method to collect data. The study shows 36.95 percent of the girls were aware of menstruation before menarche and the menstrual hygiene indices have shown a significant difference between the rural and urban girls in terms of awareness of menstruation and menstrual hygiene. 49.33% of respondents used the sanitary pads, the practices of the use old cloths was reported in 45.74% of the subjects. Suggested awareness regarding the need for information about healthy menstrual practices is very important. It is essential to design a mechanism to address and for the access of healthy menstrual knowledge.

Fadekemi Akin, faderin Agarau et al. (2012) conducted a study on opportunities reproductive health information and services for adolescent girls and young women in six Nigerian states. Study results 33.6% of adolescent girls facing the reproductive health problems in Nigeria and young girls are poor in knowing about sexual and reproductive health and issues. There is high mobile phone access but limited to access in phones about sexual reproductive health information and services. Barriers to use of these services include cost of service for adolescent girls clients, poor publicity, socio-cultural beliefs and expectations of adolescent girls and network quality. Suggested to increase the potential use

of mobile phone that the adolescent girls would easily access the sexual and reproductive health related issues.

Kotecha (2012) conducted a study on reproductive health awareness among rural school going adolescents of Vadodara district. A quantitative survey applied to identify the reproductive health issues for adolescents with their services like adolescent friendly clinic (AFC) among rural school going children. Used self-administered questionnaire among 768 students from 15 schools and conducted focus group discussion 5 each with boys, girls, and teachers were conducted. Results found that 31% of boys and 33% of girls mentioned that they aware about contraception, more than half of the boys and girls knew about various modes of transmission of HIV/AIDS. Suggested that there is special attention on reproductive health and related issues and required awareness for teachers related to adolescent health care.

Susan M. Igras *t al.* (2014) conducted a study on an investigation into very young ['adolescents' sexual and reproductive health, a paradigm shift away from simply thinking about how best to deliver information and services to adolescents who want and need them towards a more global view of prevention and harm reduction that begins at the societal level and filters down through multiple institutional layers to the individual. A portfolio of research on the very young adolescent age group, with the goal of helping researchers and programmers 'do the research that will lead to guidelines, to policy, and to actions.' The researcher advocates identifying roles that policy makers, donors, programme designer and researchers and evaluators can play to address the disparity.

Muntean, N., Kereta, W., Mitchell, K. R. (2015) addressing the sexual and reproductive health needs of young people in Ethiopia: an analysis of the current situation. Young people in Ethiopia face a number of risks to their sexual and reproductive health, including adolescent pregnancy, sexual violence, and an unmet need for family planning. This study explores the extent to which current service provision addresses the SRH needs of young Ethiopians. Methods included a comprehensive review of the academic and policy literature on young people's SRH and service provision in Ethiopia; and 14 semi-structured Key Informant Interviews. Factors affecting the utilization of sexual and reproductive services by young people include: limited SRH knowledge, lack of open discussion of sexual matters, low status of women, cultural and logistical barriers, competing priorities

among community health professionals, limited resources for health facilities, and negative attitudes of providers towards unmarried youth. While the antenatal needs of young married women are somewhat addressed, gaps exist in terms of services for unmarried youth, young men, rural youth and vulnerable groups. The national policy platform has created an enabling environment for addressing youth Sexual and Reproductive Health (SRH) needs but challenges to implementing these policies still persist. The way forward requires a focus on reducing barriers to utilization of services, and attention to underserved groups. It also requires resource mobilization, strong leadership and effective coordination between stakeholders and donors.

Jayashree S Gothankar, Reshma S Patil, Sonali H Plkar (2015)stated that knowledge and practices related to reproductive health among adolescent girls. Many girls received the knowledge of menstruation prior to menarche from their mothers. Restriction in activity during menstruation due to religious reasons is still practiced by many girls. The cross sectional study was done on 323 adolescent girls of professional colleges belonging to the health sciences faculty of a private university in Pune. Sanitary pads were used by almost all girls and all disposed of the same in a sanitary manner. The result of the study More than half of the girls have heard about emergency contraception, but this knowledge was significantly less amongst nursing faculty adolescents than among medical faculty. For 68% of girl's mother was a source of menstrual information, all most girls found restriction in activity during periods for religious purpose. The prevalence of RTI was found to be low and a very less number of girls reported a history of sexual exposure.

Mansoor Ahmed, Kusuma ML., (2016)conducted a cross-sectional study to determine the knowledge and attitude of pre- university adolsescent girls regarding STDs/ HIV and sexual health in Mysore city. This study used the stratified sampling method to collect the data, total sample was 1500 selected from the total population of 4155. Only 54% of students using sanitary pads, 38.33% backache and 37.66% dysmenorrhea were the major health problems found among adolescent girls. 95% of girls have not ever shared about reproductive and sexual health with father and 85% of with mother. There is a substantial lacunae in the knowledge and perception of the girls. The health seeking behaviour of the adolescent girl

s in poor. It is needed to be preclusion measures about reproductive health education that must be directed to adolescents for the betterment and sound nation.

Mohammed S. A. Masood*et al.*(2017)conducted study on knowledge and attitude about reproductive health and family planning among young adults in Yemen, the advantages of current study are as follows: all participants were studying in secondary school or in university or had university education and above. All participants belong to different age groups, schools, or university or belong to club sport.

In general, there are many reasons for weak awareness among adolescents and adults about Reproductive Health (RH) and Family Planning (FP) issues that were summarized as follows:

(i) lack of responsiveness of curricula through educational programs and activities on the needs of young people in areas of life skills, reproductive health, and family life

weakness of radio and TV programmes targeting adolescents and youth and the use of inappropriate broadcasting times

(ii) weakness of content of RH information in school's curricula and insufficient training of teachers in this field

(iii) Illiterate women (15–19) were more likely than those with schooling (particularly secondary school) to start childbearing early (20.4% compared with 12.2%)

Finally, RH and FP education should be strengthened through the following:

(i) Provide good quality services to young married couples

(ii) Promote awareness and sensitize young people, community leaders, and parents about the importance of RH and FP

(iii) Information about RH and FP should be provided to adolescents through medical schools curricula, health institutes, universities, and clubs sport.

(iv) Ministries of Health and Youth must support RH and FP programming through communication means and the National Population Council and the Yemeni Family Care Association must provide activities in health education and FP services.

Zainab Alimoradi and et al, (2017) have aimed to improve the understanding the factors affecting the empowerment of Iranian adolescent girls towards the sexual and reproductive health. Researcher has applied the qualitative using conventional content analysis method. Data collection was used through unstructured and in debt interviews. Data was analyzed the main theme of empowerment for care with four classes of enforcing the foundations of sexual and reproductive health, providing services in health system, reinforcing educational institutions, and consolidating the interaction between adolescent and their family. Study showed that need for inter-sectional interaction with collaboration among authorities of health systems, education systems, and policymaking institutions for wellbeing of adolescent girls.

Ana Maria, and Marie Celine, (2018) Study indicated that adolescents'sexual reproductive and human rights are apparently much referred to the interventions which are significant to analyses of human rights and sexual reproductive health. Better approaches to outcomes for adolescent reproductive health and rights. We need new assured measure for peer groups, families, and communities. The media and technology play important role in the diffusion of healthy adolescent sexual reproductive health and human rights. Inadequate gender normative socialization processes intensity for girls and boys during puberty. Parents and peers influence and regulate their conformity during their period. Suggested aligning adolescent sexual reproductive health rights and social norms through intervention offers promising full fill the 2030 sustainable development target of universal access to sexual and reproductive health rights.

MulatAyalew, DabereNigatu, GetachewSitotawand**AyalDebie(2019)**Study indicated students who had participated in Reproductive Health (RH) clubs at school and discussed on Sexual and Reproductive Health (SRH) issues with parents were 1.41 and 2.50 times more likelyto have favorable attitude compared to students who had not

participated, respectively. This finding supported by a qualitative finding in Kenya. This might be due to that both parents and peers may share their experiences with their peers, parents, and expertise, particularly proper parental guidance on some of the genesis of Sexual and Reproductive Health (SRH) problems experienced in young people would help the participants to have a positive attitude towards Sexual and Reproductive Health (SRH) services. Therefore, strengthening women's education, encouraging discussions with parents, and participation in reproductive health clubs at school levels might improve the knowledge and attitude towards Sexual and Reproductive Health (SRH) rights.

2.5 Studies on Healthy Eating Habits of Adolescent Girl

Health issues have attracted enormous attention worldwide in the last few decades. Researchers have identified many factors on the basis of empirical studies which explain how an unhealthy eating habits among adolescent girls lead to many problems like various socio-economic and demographic factors such as age, education, and standard of living, etc.

Kumar (1975) noted in his study that insecurity was significant in boys and a lack of confidence in girls. Adjustment problems related to home, health and social relations were found in adolescents important tasks and characteristics of the self-system that emerge during infancy, toddlerhood, childhood, and adolescence. Habits and behaviours picked up during adolescence (risk taking behaviour, substance abuse, eating habits and conflict resolution) have lifelong impacts. Adolescence is the last chance to correct growth lag and malnutrition. And also described the relationship between the self-esteem and social agents. Suggested the schooling and pubertal involvement influence the adolescent development. There is discussion based the implication of developmental research for clinical practice is needed.

Johns*et al.* (2001) found that the role of snacking as a causative factor in the increased prevalence of obesity in children is not clear. The most significant change in snacking behavior for children over the past two to three decades has been the greater number of snacking occasions per day, not the amount of energy consumed per snack. There is need of effective teaching for students regarding importance of intake the nutrition

and snaking as a causative factor in the increased prevalence of overweight in students. It directly impact on health so there is need of awareness about nutrition for adolescent girls.

Wall M *et al.* (2003) conducted a study with the aim to identify the correlates of fruits and vegetables from within the domains of personal factors (taste preferences, health/nutrition attitudes, weight/body concerns, and self-efficacy), behavioral factors (meal frequency, fast food intake, and weight control behaviors), and socio-environmental factors (social support for healthy eating, family meal patterns, food security, socio-economic status, and home availability of fruits/vegetables). This study further aimed to identify correlates of home availability and taste preferences for fruits/vegetables, and to explore patterns of interaction between availability and taste preferences. The population included 3957 adolescents from 31 public middle and high schools in Minnesota. Structural equation modeling was used for model testing. It was found that the strongest correlates of fruit/vegetable intake were home availability of fruits/vegetables and taste preferences of fruits/vegetables. The final model explained correlation of taste preferences including health/nutrition attitudes and household availability of fruits/vegetables. A test of interaction effects indicated that when home availability of fruits/vegetables was low, intake patterns did not differ, regardless of taste preferences. In contrast, even when taste preferences for fruits/vegetables were low, if fruits/vegetables were available, intake increased. Overall , it is concluded that interventions should be adopted to increase fruit/vegetable intake in adolescents and need to target socio-environmental factors such as greater availability of fruits/vegetables.

Hannan, P. J, Story, M., *et al.* (2007) conducted a study with an aim to examine the longitudinal and secular trends in fruit and vegetable intake among two cohorts of Minnesota adolescents over the period 1999–2004. Longitudinal trends indicated that adolescents decrease their daily intake of fruit and vegetables by an average of 0.7 servings during the transition from early to middle adolescence and by 0.6 servings from middle to late adolescence. Analysis of age-matched secular trends at middle adolescence showed a mean daily decrease of 0.7 servings among girls and 0.4 servings among boys between 1999 and 2004. Finally, the conclusion drawn that large longitudinal and secular declines in fruit and vegetable intake of adolescents indicate a strong need for further research to understand why consumption is decreasing among adolescents and to develop more

effective interventions for increasing fruit and vegetable consumption during this critical developmental period.

Sharma *et al.* (2009) conducted a study titled 'health awareness of rural adolescent girls: an intervention study' aiming to see the awareness of adolescent girls regarding health aspects through interventions. The study was conducted among 112 adolescent girls (14-18 years) randomly selected from two blocks of Kangra district of Himachal Pradesh. The results of the study showed that majority of girls faced problems during menstrual periods. 86.6% respondents reported lower abdominal pain (86.6%) followed by backache (53.7%). Post testing was conducted after the period of intervention. The results showed there was increased the awareness level of girls about health problems. Concluded that the intervention based study effect more on awareness levels.

Larson, N. I., Harnack, L., Wall, M, *et al.* (2009) conducted a study to describe changes in calcium and dairy intake during the transition from middle adolescence to young adulthood and to identify baseline correlates of calcium intake in young adulthood. Result drawn that during the transition to young adulthood, mean daily calcium intake of females and males decreased by an average of 153 mg and 194 mg respectively. Mealtime milk availability, health/nutrition attitudes, taste preference for milk, healthful weight control behaviors, and peer support for healthful eating at baseline were associated with better follow-up calcium intake. Time spent watching television and lactose intolerance was associated with lower intake at follow-up. It is concluded that interventions for the nutrition are needed to counter longitudinal decreases in calcium intake. Interventions targeted to adolescents should address the availability of milk at meals and other identified support for healthful eating.

Wood-Wright, *et al.* (2009) stated that in an examination of dietary intake and patterns among U.S. families found that the resemblance between children and their parents, eating habits is weak and that factors other than family and parental eating behaviors may play an important role in affecting children's dietary intakes. Randomly selected 150 students from senior high school students in Ghana. The results showed the positive relationship between peer influence and eating habits that the higher pressure from their peer. More the students were practicing unhealthy eating habits. Girls were more eating unhealthy eating rather than boys. The results of multiple regression analysis showed

peer influence was a better predictor of students eating habits than parental and media influences.

Burgess Champoux, T., *et al.* (2010) done a survey on whole-grain intake, correlates among adolescents and young adults and survey data indicate that few adolescents or young adults consume whole grains in the correct amount recommended to prevent chronic disease and maintain a healthful weight. Interventions are needed to address this gap; however, little is known about what modifiable factors influence whole-grain intake among youth. This study aimed to identify socio-environmental, personal, and behavioural correlates of whole-grain intake among adolescents and young adults. The findings suggest that nutrition interventions should address the availability of whole-grain foods in homes and restaurants. In addition, young people should be provided with opportunities to taste a variety of whole-grain foods to enhance taste preferences and self-efficacy in consuming whole-grain products.

Keast*et al.* (2010) found the relationship between snacking and obesity is inconsistent. The use of different study designs and definitions of snacking could explain inconsistent results justifying the need for more research to identify the risk of obesity associated with snacking. A cross sectional data from the national health and nutrition examination survey 1999-2006 collected. The age group of 9-13 years and 14-18 years. Results showed that 31.5% adolescents were skippers the breakfast and 35.9% children. Suggested RTE cereal consumers had more favorable nutrient intake. There is need of guidance about nutrition intake for adolescents.

Yearul Kabir, *et al.*, (2010) conducted a study on dietary pattern and nutritional status of adolescent college girls of Dhaka, Bangladesh with a particular focus on the prevalence of anemia and appropriate knowledge about it among them. The results revealed that habitual dietary pattern which indicates poor consumption of milk, liver and leafy vegetables. Food intake data revealed a deficit of 473 kcal/ day in energy. Mean intake of carbohydrate and fat were lower than RDA; while protein, iron, vitamin A and vitamin C intake were much higher. Anthropometric data indicated that 63 percent of the girls were stunted (height-for-age <95% of NCHS reference values) and 45 percent were underweight (weight-for-age <75% of NCHS reference values). The prevalence of anemia (Hb<12 g/dl) among the participants was 23%. About 17 percent had low serum iron (<40 µg/dl), 23

percent showed evidence of iron-deficient erythropoiesis (Transferrin Saturation <15%) and only 8% had vitamin C deficiency (<0.29 mg/dl). About 65 percent of the participants had correct knowledge about the causes of anemia; while 72.3 and 80 percent of participants knew about the prevention and treatment of anemia. Surprisingly, 73.8 percent of the participants were not aware regarding the sources of iron-rich foods. Results indicate an overall poor nutritional status of the urban adolescent college girls in Bangladesh and there has to bedire need of appropriate nutritional interventions to overcome the problem.

Cutler GJ, Flood A, *et al.* (2011) conducted a research study to find the association between major patterns of dietary quality and weight status in adolescents. It is found that the relationship between dietary intake and obesity is complex, and dietary pattern analysis may offer new insight. The result shows associations between dietary patterns identified in a diverse cohort of adolescents and weight status cross-sectional over a 5-year period. Project EAT (Eating among Teens) (Time 1) collected data on 4,746 middle (younger cohort) and high school (older cohort) students in 1998-99. EAT-II (Time 2) resurveyed 2,516 of the original cohort in 2003-2004. All analyses were run separately by age cohort and sex. The relationship between dietary patterns identified previously (vegetable, fruit, vegetable & fruit, starchy food, sweet & salty snack food, and fast food) and weight status were examined using logistic regression. All analysis was adjusted for socio-economic status, race/ethnicity, and activity level (longitudinal analyses were also adjusted for baseline weight status). In cross-sectional analyses, higher adherence to dietary patterns loading heavily on vegetables was associated with a lower risk of overweight/obese weight status in older and younger girls, whereas higher adherence to a sweet & salty snack food pattern was associated with lower risk in older and younger boys. These associations were found prospectively in older boys and girls, but were no longer significant in analysis,adjusting for baseline weight status. Authors did not find consistent or intuitive associations between dietary patterns and weight status. Identified patterns may not capture the elements of the diet that are truly important in determining adolescent's weight, or diet may not be the primary driver in determining weight status at this age. Methodological difficulties in assessing diet must also be taken into consideration.

Mishra Madhusmita*et al.* (2012) conducted a study in Bangladesh. The cross sectional study was taken and 679 samples collected the information age group of 12-18

years old conducted in government colleges in Banladesh. Found that iron deficiency is common among adolescent girls. The government of Bangladesh recommends supplementation of micro-nutrients to combat micro-nutrients deficiency. Knowledge about this directly impacts on health and nutrition which is often better for sustainability. The finding of the study reveals that the majority of (>57%) the rural adolescent girls needed basic dietary knowledge. Suggested that there is need of knowledge and create environment related to nutrition intake for adolescent girls.

Nagamani, G. (2014) presents the data on clinical nutrient status of girls, the clinical survey revealed that most of the girls showed clinical signs and symptoms manifested by nutritional deficiencies such as calcium deficiency, vitamin A, Zinc deficiency, and iron deficiency. Out of 362 girls, 30 girls were normal i.e. they did not show any signs of nutritional deficiencies. The least affected group showing these symptoms are 10-12 years of age. Girls from rural localities were better in their clinical status compared to tribal and rural horizon girls except in case of Iron deficiency. It is observed that all the three groups of girls had one or the other nutrient deficiencies. Due to illiteracy status and non-exposure of the mothers to the benefits of sanitary napkins, information about safe menstrual practices is not properly conveyed to their daughters.

Ragini N. and Bindu V. (2017) stated that in India, the majority of adolescent girls getting married before the age of 18 years and there is no more knowledge and information about nutritional status of adolescent girls. They focused on knowledge, attitude, and practice in nutritional status of adolescent girls between age group 13 to 19 years, used modified questionnaire with anthropometric techniques to collect height and weight of the subject. The results revealed that 55.5% of respondent's opined that ideal body can gain a balanced diet, 45% of adolescents preferred to eat snacks in schools, 64.5% of respondents like more deep fried, salt and sugar foods. Suggested that there is a need of intervention based programmes on nutritional health for adolescent girls. Educating the teenagers about nutrition that will help them to lead long a better life.

Yearul Kabir and at al., (2020) have examined the dietary pattern and nutritional status of adolescent girls of Dhaka, Bangladesh. A cross sectional study was conducted among 65 adolescent girls the age ranges of 15-19 years were selected randomly. Results found that 65.23% of the adolescent girls not aware about nutrition intake, 33% of the

adolescent girls faced the low weight; overall there were poor nutritional status of the urban adolescent college girls in Dhaka, Bangladesh. There is need of nutritional based activities, awareness programmes and appropriate training for teachers about the importance of nutrition intake. The author suggested that there is need of appropriate nutrition based intervention programmes for adolescent girls to overcome nutritional related problems.

2.6 Studies on Effect of family and Social Environment on Reproductive Health and Healthy Eating Habits among Adolescent Girls

Numerous studies have been made of the influence of home environment and social adjustment of adolescents. It infers that homes of different types tend to develop distinctive social characteristics among young children. Studies shows that, how home discipline affects the social adjustments of children. In most of the homes, discipline is disgracefully inconsistent depending mostly on the whims and moods of the parents. Children are spanked and applauded for the same type of behavior and if this fails to produce any consistent pattern of behavior among them, then there is no room for surprise. This shows that long before the child enters school, he is already well conditioned and early conditioning is very powerful. Thus, home is an indispensable agency in child upbringing because the feeling of security and affection provided by parents at home cannot be provided by any other agency. Findings revealed that experience and challenges varies in the family and social environment on the development of the adolescent girl. Recommendations made for the alleviation of this paternalistic attitude include.

Chatier (1988) conducted study on social relationships and socialization and observed that modern family emerged as a result of centuries of evolution directed partly towards protecting children from external influences in the environment and nurturing them for success in school and the economy. But it also creates new problems in social relationships and socialization. In some ways, it cuts children off too drastically from the life of the larger community and it has been described as constituting a kind of emotional "hot-house" in which its members become too dependent on each other for affection and support.

Encyclopedia of Children (1992) The social competence of adolescence, encyclopedia defines how social competence is necessary for children for their adjustment. Social competence is the condition of possessing the social, emotional, and intellectual skills and behaviors needed to succeed as a member of society. Social competence refers to the social, emotional, and cognitive skills and behaviors that children need for successful social adaptation. Despite this simple definition, social competence is an elusive concept, because the skills and behaviors required for healthy social development varies with the age of the child and with the demands of particular situations. A socially competent pre-school child behaves differently from a socially competent adolescent.

A child's social competence depends upon a number of factors, including the child's social skills, social awareness, and self-confidence. The term social skills describes the child's knowledge and ability to use a variety of social behaviors that are appropriate to a given interpersonal situation and that are pleasing to others in every situation. Children who have a wide repertoire of social skills and who are socially aware and perceptive are likely to be socially competent. Parents are the primary source of social and emotional support for children during the first years of life, but in later years, peers begin to play a significant role in a child's socio-emotional development. Increasingly with age, peers rather than parents become preferred companions, providing important sources of entertainment and support.

During adolescence, peer relations become particularly important for children. A key developmental task of adolescence is the formation of an identity or sense of the kind of person one is and the kind of person one wants to be. Adolescents try different social roles as they interact with peers, and peers serve as a social stepping stone as adolescents move away from their emotional dependence upon their parents and toward autonomous functioning as an adult. In many ways, childhood peer relations serve as a training ground for future interpersonal relations, providing children with opportunities to learn about reciprocity and intimacy.

When children experience serious difficulties in peer relations, the development of social competencies may be threatened. When children with poor social skills become

rejected, they are often excluded from positive interactions with peers that are critical for learning social skills. Hence, the social competence deficits of rejected children may increase over time, along with feelings of social anxiety and inadequacy.

Les B. Whitbeck, et al. (1994) in their study, they investigated the impact of divorced mothers' doting behaviors and sexual privilege attitudes on the sexual attitude and behaviors of their adolescent children. A selected sample of 210 in Iowa, Reiss's (1967) five item sexual permissiveness and Cronbach's alphas for measure scales were used. It suggested that single parents or divorced mothers should be sensitive about their behaviors and attitudes for their personal relationships and this may influence their adolescent children who are practicing the same behaviors, which needs discussions with adolescent children to strengthen proper adult behavior and choices.

Rhodes *et al.* (2000) conducted the conceptual model of the mentoring process, drawing from theory and research on child adolescent development and close relationships. highlighted the benefits of mentoring interventions and validate the hypothesis that improved perceptions of parental relationships, although not the sole determinant, are important mediators of change in adolescents' academic outcomes and social behaviours. Author recognized that the effect of mentoring are depend on age and situation of the youth. And also the quality and long term duration of the relationships. Much focused on mentoring process that can effective in their efforts to improve the lives of the youth.

Breut C. Miiler (2002) The risk of adolescent girls' pregnancies is associated with adolescents' sexual manners because many researchers have stressed the main causes of pregnancy, sexual relations, and use of contraceptives. The lesser average of pregnancy risk is connected with adolescents' enduring sexually self denying, delayed onset of sexual relations, and also using contraception methods. The study revealed that living with single parents in a lower socio-economic status of family, keeping sexually active with siblings, which influences on adolescent for sexual behaviour. Parent-child familiarity, parental guidance, direction of parent's morals towards children or values reduce the risk of adolescent pregnancy.

Collins.W.A. (2004) relationships during adolescence. Author stated in the research article that relationships during adolescence shows changing relationships, changing youth, and interpersonal contexts of adolescent development. He observed that,

most significant factors which help in adolescent's socialization are parents, peers, and their friends. The relationship with these helps adolescents in molding their behavior and values. Close relationships from these are the primarily settings for the acquisition of skills, ranging from social competencies to motor performance (e.g., athletics or dancing) and to cognitive abilities. Beside this, he also makes distinction in parental style and practices, implies that variations in parental style, implicate the quality, and as well as the content of parent-child relationships. Variations in the quality of relationships, in turn, shape children's receptiveness to specific socialization practices.

Durell H. Johnson, *et al.* (2007) Inter-parental Conflict and Family Cohesion: Predictors of Loneliness, and Social Avoidance in Late Adolescence. In their research study, researcher addresses the proposed views that late adolescents' perceptions of their family environment (i.e. perceptions of inter-parental conflict and family cohesion) are associated with their reports of loneliness, and social avoidance. It is proposed that inter-parental conflict and family cohesion are positively associated with adolescents' feeling of loneliness, which is positively related to their reports of social anxiety and avoidance. Family environment is related to characteristics of adolescents' personal development and social interactions. Although potentially different for males and females, decreased family cohesion and increased inter-parental conflict can inadvertently provide family environments that are associated with increased feelings of loneliness, which may be associated with problems in adolescents' social interactions (i.e., social anxiety and social avoidance). Analyses of responses from 124 late adolescents revealed that feelings of loneliness were related to perceived levels of inter-parental conflict for males and females and decreased family cohesion for females. Furthermore, late adolescents' feelings of social anxiety and social avoidance were related to their feelings of loneliness. The findings in this study show about how deteriorated family systems may provide contexts that are associated with adolescents' feelings of loneliness as well as their ability to engage in social interactions outside of the family system.

Rajni Dhingra, Sarika Manhas and **Neetu Sethi (2007)** a study of certain selected variable: family environment and social adjustment. This article studied certain selected variables which are family environment and social adjustment related to hearing impaired children. The most of the parents were found to provide supportive environment to the

hearing impaired children and exhibited adaptability in adjusting to the special needs of their impaired children. The parents also reported incidences of negative social response. Almost all the families scored average on most of the dimensions of family environment scale such as cohesion, organization, active recreation orientation etc., except for the dimension of independence where majority of families scored low. The results further revealed that on the basis of Social Adjustment Inventory 54% of the children were found to be moderately adjusted followed by 33% and 13% who were negatively adjusted and adjusted respectively. At the end, researcher observed that majority of families found to be supportive home environment. Majority of the families scored average on various dimensions of family environment scale for e.g. cohesion, expressiveness, and organization etc. But at the same time the degree of independence provided to the hearing impaired children found low.

Gupta , *et al.* (2008) study focused on the impact of perception of punishment and nurturance which is same for the emotional maturity of the adolescents from joint and nuclear family structures. Besides this, protectiveness and permissiveness for the joint family and social isolation and reward for the nuclear family structure were found to contribute significantly to emotional maturity of female adolescents. Taken 110 samples size of the adolescent girls in a perspective study, between age group of 13-16 years of low socio-economic group of kurukshetra district. The results showed there is 81.81% of girls were suffering from anemia, due to low dietary intake their weight was found less. The adolescent girls were not benefited the welfare programmes which is run by government such as ICDS (Intigrated Child Development Service).

Dasgupta and **Sanyal (2008)** the objectives of the study is to find out the status of menstrual hygiene among adolescent girls. A descriptive cross sectional study was conducted among 160 teenagers secondary school going residing in rural health unit and training center, singer, west Bengal. Results showed 67.5% of girls were aware about the menarche, 11.25% of girls used the sanitary pads during period. Family serves as an enriching ground for early socialization and personality development from which a healthy environment emerges out of unconditional love and acceptance, true understanding, behavioural management and guidance and also academic encouragement and assistance.

Suggested that educational television progrmmes, trained health personnel, teachers and knowledgeable parents play essential role for adolescents girls.

Tikoo (2008) revealed that as the home and school deprivation increases, achievement motivation deteriorates which means that deprivation regarding food, medicine, clothing facilities, parental love, affection and encouragement develops emotional instability, psychic imbalances among children and they experience anxiety, irritation, doubt, conflicts which ultimately lead to low achievement motivation. Similarly unexpected, unfavorable and undesirable behaviour of the teachers develops the feeling of deprivation among students result in feeling of insecurity, futility and inferiority which finally resulting in low achievement.

Arpit (2013) a study of social adjustment of the students studying in secondary and higher secondary school in relation to certain variables. The present study is intended to examine the social adjustment of secondary and higher secondary school students. The study conducted with sample of 160 students (80 boys, 80 girls) which randomly selected from the various secondary and higher secondary schools. A standardized questionnaire developed by A.K.Singh and A.Sengupta was adopted for this study. The data was analyzed to examine the influence of individual factors on adjustment variables. 't' test was used for calculation. The results shows that there is no significant mean difference in relation to boys and girls, and there is no significant mean difference in relation to secondary and higher secondary level students. Thus from the result, it could be said that the higher secondary students are doing little more adjustment than secondary students.

Dhanajay Joshi and **Indrajeet Dutta (2014)** conducted a study on the development and effectiveness of the social adjustment scale for urban adolescence where it is pointed out that an individual is always faced with conflict and struggles related to needs and satisfaction, especially with his social environment. An individual has to reconcile with his conflict and struggle and thus, maintain equilibrium, which is generally called an adjustment. Though, there are several areas of adjustment where adolescents have to adjust, like school, home, emotional adjustment, educational and personal adjustment, but the most important is the social adjustment of adolescence, especially in light of present contemporary society.

The investigator developed standardized scale on the social adjustment on the urban population in the age group of 13-17 years. Thereafter, tool was administered to 246 students taken from heterogeneous schools. The number of male and female students participated in the study was 131 and 115. The result obtained was that majority of the male and female fall in the moderate category of social adjustment. Moreover, there was no significant difference between the female and male students on social adjustment.

The result obtained was quite similar to other studies where social adjustment was average in both the sexes. The moderate level or average level of social adjustment of large sample of student somehow triggered the need of healthy school and home environment. They have to play pivotal role in moderation when the children are in a position of unbalanced situation and thus try to reconcile with the needs and satisfaction, so that child has better social adjustment in adult life. Social adjustment indicates in regard to the gender as a determinant factor for social adjustment, result indicated that there is no significant difference between the female and male students. This is similar results what has been reported in other studies. The major limitation of the study shows that data was mainly obtained from urban locality whereas to get the real picture of social adjustment, one need to obtain data from rural part of India.

2.7 Studies on Need for Guidance and Counselling

Guidance programme, like any other educational programme, requires careful and consistent development. This ensures that the programme responds to the unique needs of its clients. It provides benefits to students by addressing their intellectual, emotional, social and psychological needs. It is important that today's guidance and counseling programme should be based on development, so that it assists students, who are growing up in a complex world. It should help them to develop into full human beings, capable of maximizing their potential in all personal, educational, social, or career-related aspects. The following are the review of related literature on guidance and counselling.

Premlata (1984) conducted a study on Teachers, Parents and Counselors approaches towards Personal, Vocational, and Educational Problems of Adolescents. The major objectives of the study were to identify various psychological problems of adolescents, to assess the effectiveness of different counselling approaches in solving

various groups of problems, and to offer suggestions for tackling the problems of adolescents effectively. The sample of 924 students was selected from the schools of Phagwara of Punjab. Out of these, only 35 students had serious problems. Case study approach has been implemented for these particular 35 students. Others were studied through a survey approach using Mooney's Problem Checklist. Other tools used were the preforms relating to the problems of adolescents for parents, teachers and counselors, the checklists for parents, teachers and the counselors, and tape recorded interviews. Some of the major findings of the study revealed that adolescents as a group had a large number of problems. These related to physical development, physical growth, physiological growth, intellectual development, emotional development, social development, and moral development. Parents were not equipped for the role of counselling. They were ignorant about the problems faced by their children. So, Counselling must be done for solving the problems of adolescents.

Tripathi (1986) made an investigation to determine the various guidance needs of the pupils of secondary and higher secondary schools and to observe the relationship between these guidance needs and some variables such as sex, grade, birth order, parents' educational level, size of the family, and type of school. Pupils' problem checklist was developed consisting of 240 items having nine different areas: (i) physical health needs, (ii) familial needs,(iii) social needs, (iv) sexual needs,(v) personality needs, (vi) educational needs,(vii) financial needs,(viii) future life needs and vocational needs, and (ix) religious needs.

The checklist was employed on the sample of 720 pupils chosen from 24 schools situated in different areas of metropolitan Ahmedabad. For data analysis, t-test and one-way analysis of variance were applied. Major findings of the study indicated a significant relationship exists between grades of pupils and social, personal, educational, financial, vocational and religious needs.

WHO (1993) mentioned about Life skills Education for Children and Adolescents which has to be implemented in Schools. The purpose was to outline a framework for life skills programme development both conceptually and practically. There were three parts:

Part I tells about an introduction to Life Skills for psychosocial competence, Part II describes guidelines for the Development and Implementation of life skills Programme and Part III focus on Training and workshops for the Development and Implementation of Life skills Education.

UNESCO (2001) prepared a Module on 'Guidance and Counselling Programme Development' in Botswana. It is designed to aid in starting a Guidance and Counselling Programme. It stresses the importance of planning in programme development and the need to carry out an initial survey to facilitate the definition of goals and objectives. Advice is given on how to design, implement and evaluate programmes effectively.

Yesilyaprak (2001) conducted a survey model with 499 adolescents, age group of 16 and 18. Author wanted to investigate association between perceived social support, self-esteem and anger expression for adolescents. Used the social support scale and study found that there was significant negative relationship among social support from family and teachers, there was no significant relationship between peer support and also identified a significant relationship between self-esteem anger control. Suggested about group counseling where both the adolescents as well as their parents should develop special skills in facilitating the understanding and behavior therapy offered with specialized techniques to help people with abnormal or complicated behavior pattern.

Keating (2004) the study was conducted a cognitive development in adolescence. Three theoretical approaches were taken for adolescence cognitive development. stated that adolescents develop more executive control in the management of emotions in self-internal systems. A central feature of teenager's new knowledge and capacity for understanding emotions in relationship depends on their new complex interacting systems, which include interacting interpersonal system (self, others, social groups), cultural systems and internal biopsychic systems. Cognition as reasoning, cognition as processing and cognition as expertise. A major aspects of this review study is that claims for independent developments in adolescence cognitive development. Found that the advanced level of reasoning arise bottom up changes in processing efficiency.

Umelaila (2006) studied impact of socio-cultural factors on the personality development of adolescents. The sample consist children aged 11-16 years. Initially an interview was conducted with mothers of these children by administering structured open-

ended questionnaire. The study revealed that the factors that influence the personality development were identified as parent's economic condition, peer group, school environment, teacher's guidance, extra-curricular activities, and government policies. On the basis of the findings , more studies can be done on personality development of children which is suggested by author.

Hartman and **Betz (2007)** explored how the Big Five personality factors exert two kinds of effects on career self-efficacy: generalized or nonspecific effects and domain-specific, content correspondence effects. The hypothesis was examined using relationships of the Big Five personality factors to 24 domains of career-related self-efficacy- confidence for the six Holland areas, 17 basic dimensions of vocational activity represented by the Expanded Skills Confidence Inventory, and career decision self-efficacy. Findings suggested about generalized effects for conscientiousness and extraversion, in that both correlated positively with a broad range of self-efficacy domains: Neuroticism displayed a significant negative relationship with nearly all forms of career self-efficacy. Content correspondence was shown in significant correlations of Openness to Experience with self-efficacy for creative and intellectual pursuits. However, Agreeableness showed no significant relationship with career self-efficacy variables. In summary, findings from this study underscore that career behaviour and personality overlap and interact to a significant extent. Furthermore, the career personality relationship is not limited to the prediction of vocational interest and performance. The Big Five also account for significant variance in virtually all of the numerous vocational self-efficacy variables assessed in this study.

Deborah (2007) explored different factors that influence the development of "Privacy Concern" with adolescents, The objective is to find out the different factors that influence the adolescents to about privacy concern. The development of such privacy concerns leads to the adoption of behaviour that can help teens for protecting them. Age group of 8-18 years, the results showed that materialism increases from middle childhood to early adolescence, and decreases from early to late adolescence. Author suggested that there is a privacy concerns take decision them self freely.

Laura Hensley Choate (2007) Stated regarding complaining about body image is a universal problem among adolescent girls. Total 480 adolescent girls collected consent, School counsellors play an important role and needs to evolve and develop useful

prevention programmes in schools. The model of this study is to encourage adolescent girls' body image flexibility is gifted. That modal identifies five protective factors that help adolescent girls competence to stand socio-cultural pressures about thinness. Particular preventive ideas and counselling planning that may help from school counsellors to strengthen a positive body image in adolescent girls. The school counsellors need to develop effective prevention programmes to promote adolescent girls for positive Body image.

Dweck (2008) in the article "Can personality be changed? The role of beliefs in personality and changing investigator's beliefs lie at the heart of personality and adaptive functioning and they give a unique insight into how personality and functioning can be changed. It focused on two classes of beliefs— beliefs about the malleability of self-attributes and expectations of social acceptance versus rejection— and show how modest interventions have brought about important real-world changes. He concluded by suggesting that beliefs are central to the way in which people package their experiences and carry them forward, and that beliefs should play a more central role in the study of personality. Beliefs matter, beliefs can be changed, and when they are, so too is personality.

Santhosh (2009) conducted study in Hisar district of Haryana state, 240 adolescents taken sample size the age group of 16-18 years the questionnaire was developed the problem inventory developed by verma (1987). Results revealed that the adolescents of dual earner families faced more family problems, personal problems adolescents single earner families faced more family and personal problems. examined the relationship between socio-economic status and vocational interest of secondary school students and found that it differs significantly with respect to students belong to high and average socio-economic status and their vocational interest. Suggested that there is need of more concerns of adolescents of single earner families.

Kumari (2013) in the article "significance of imparting guidance and counseling programmes for adolescent students" revealed the need for developing a guidance and counseling programme for adolescent students for enhancing life competencies and solving problems. The article indicated that the guidance and counselling plays a vital role for preventing educational, personal, social, mental, emotional, and other similar problems among school students. The modern society poses a major complicated problems leading to

conflicts, frustration, unhealthy habits that impact the problems in values and maladjustment among adolescent girls. So there is need of guidance and counselling programmes as for adolescents to overcome these crises.

Tanu (2013) studied the effect of Life skills training on dietary behaviour of school adolescents in Delhi. Skill-based education has been shown to reduce high-risk behaviour among adolescents, but in India, life skills have often been looked at only from the reproductive health perspective. Therefore, the study was undertaken to assess the effect of life skills training on dietary behavior of adolescents studying in grades 9 and 11 of two schools in Delhi. This was a non-randomized interventional study with a control group. A self-administered questionnaire was adopted for assessment of dietary behavior at baseline after completing the life skills training and the gap was 3 months and 15 days. Two life skills training sessions were imparted to the intervention group, focusing on the use of life skills in making healthy choices. Participants in the intervention group (n = 180) showed significant improvement in knowledge (P < .001), attitude (P =.007), and practices (P < .001) following the life skills training. To conclude, a skill-based approach does help improve the dietary behavior in adolescents.

2.8 Overview

The review of related literature shows that much research has been conducted on five headings: a) Major Features of Adolescent Girls b) Reproductive Health c) Healthy Eating Habits d) Effect of Family and Social Environment on Adolescent Girls e) Need for Guidance and Counselling.

The present study is focused on the study of Adolescence, Reproductive Health, Healthy Eating Habits, Family and Social Environment Effect, Need for Guidance and Counselling. The researcher has come across many journals and websites for literature review on the topic which offer studies conducted in the above said areas. However, there are few research studies on these areas which emphasize much on interaction effect of the selected variables in the present study.

The studies conducted by Hyde (1990), has cited Harter (1990), Fenwick et al., (1994), Clemes and Bean (1999), Lesley and Hardin (2002),Robert Crosnoe and Monica Kirkpatrick Johnson (2011) and Sharma Renubala et al., (2012), Bhavana Langer et al, (2015), Wheelereet et.al (2016) focused on major features of adolescent girls relatively. The findings of these studies revealed about three future challenges/opportunities including efforts to illuminate bio-social processes, link adolescence to other life stages, and account for the influence of major social changes.

Knowledge and attitude about reproductive health among rural adolescent girls in Kuppammandal: an intervention study. This study evaluated the effect of health education by health professionals on adolescent girls' knowledge and attitudes towards reproductive health. The present study indicates that the adolescent girls in rural areas are still ignorant about many aspects of reproductive health especially regarding contraceptive methods. All these findings regarding awareness of girls about contraception concur with findings of some of the other Indian studies. Similar findings have been noted in other developing countries as well.

The studies by Kissling (1996), Jane Hughes and Ann P. McCauley (1998), Abioye Kuteyi (2000), Nagarjan (2003), Olayiaka O and Akinyinkao (2004), Ogunlayi M.A. (2005), A Seifu, M Fantahun, A Worku (2006), Adhikari et al., (2007), Somanath Roy (2007), Jejeebhoy. S. (2007), Poureslami et al., (2008), Oster et al., (2010), Malleshappa K, and Krishna S. (2011), Subhas et al., (2011), Fadekemi Akin Faderin Agarau (2012), Kotecha (2012) Susan M. Igras, et al., (2014), N Muntean, W Kereta, KR Mitchell (2015), Jayashree S Gothankar, Reshma S Patil, Sonali H Plkar (2015), Mansoor Ahmed, Kusuma M. L. (2016), Mohammed S. A. Masood, et al., (2017), Zainab Alimoradi and et al., (2017), Ana Maria and Marie Celine (2018), Mulat Ayalew (2019), showed that the girls were aware of menstruation before menarche and the menstrual hygiene indices have shown a significant difference between the rural and urban girls in terms of awareness of menstruation and menstrual hygiene.

Strengthening women's education, encouraging discussions with parents and participation in reproductive health clubs at school level might improve the knowledge and attitude towards Sexual and Reproductive Health (SRH) rights. The study recommends

formulation of appropriate intervention strategies and programmes for adolescents, so that they may be aware and knowledgeable of their sexual and reproductive rights.

The studies conducted by Kumar (2000), Johns, et al., (2001), Brent C. Miller (2002), Wall M, Perry C, Story M et al., (2003), Hannan PJ, Story M, et al., (2007), Sharma et al., (2009), Larson NI, Harnack L, Wall M, et al., (2009), Wood-Wright, et al., (2009), Burgess-Champoux, T., et al., (2010), Keast et al (2010), Burgess-Champoux T, et al., (2010), YearulKabir, et al., (2010), Cutler GJ, Flood A, et al., (2011), Mishra Madhusmita et al., (2012), Krishna et al., (2013), Dr. Nagamani G. (2014), Ragini N. and Bindu V. (2017) Yearul Kabir et al., (2020) revealed that adjustment problems related to home, health and social relations were found in adolescents. Habits and behaviours picked up during adolescence (risk- taking behaviour, substance abuse, eating habits and conflict resolution) have lifelong impact. Adolescence is the last chance to improve growth lag and malnutrition.

It was found that the strongest correlates of fruit/vegetable intake were household availability and taste preferences of fruits/vegetables. The final model explained about correlates of taste preferences including health/nutrition attitudes and household availability of fruits/vegetables. A test of interaction effects indicated that when household availability of fruits/vegetables was low, intake patterns did not differ regardless of taste preferences. In contrast, even when taste preferences for fruits/vegetables were low, if fruits/vegetables were available, intake increased. Overall, it was concluded that interventions should be there to increase fruit/vegetable intake in adolescents and that need to focus on socio-environmental factors such as greater availability of fruits/vegetables.

The studies conducted by Chatier (1988), Encyclopedia of Children (1992), Les B. Whitbeck et al (1994), Rhodes, *et al.*, (2000), Collins.W.A (2004), H. Durell Johnson et al., (2007), Rajni Dhingra, SarikaManhas and NeetuSethi (2007), Gupta *et al.*, (2008), Dasgupta and Sanyal (2008), Tikoo (2008), Arpit (2013), Dhanajay Joshi and Indrajeet Dutta (2014), showed the effects of social competence refers to the social, emotional, and cognitive skills and behaviors that children need to have for successful social adaptation. Despite this simple definition, social competence is an elusive concept, because the skills and behaviors required for healthy social development vary with the age of the child and

with the demands of particular situations. A socially competent preschool child behaves differently from a socially competent adolescent.

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Poor family relationships is associated with higher levels of delinquent behaviour, possibly due to the fact that parents in those families provide poor role models and engage in ineffective discipline strategies. Similarly, low parental support is often related to adolescent delinquency. By contrast, adolescents with strong parental support tend to engage in less deviant behaviors than adolescents with weak parental support, even when they associate with deviant peers. The influence of parents, however, does not disappear completely once children enter adolescence. Successful adjustment during the years of adolescence can depend to a high degree on the available emotional and social support in the family. As a role models and parents' socio- emotional support, parents and older siblings can have a positive impact on the personal characteristics of adolescents, such as their sense of competence and mastery, which, in turn, might facilitate successful transition from childhood to adolescence.

The studies by Premlata (1984), Tripathi (1986), WHO (1993), UNESCO (2001), Yesilyaprak (2001), Berton and Buwa (2003), Keating (2004), Hartman and Betz (2007), Keating (2004), Umelaila (2006), Deborah (2007), Lavra Hensley Choate (2007), Dweck (2008), Santhosh (2009), Kumari (2013), and Tanu (2013) found that adolescents as a group had a large number of problems. These were related to physical development, physical growth, physiological growth, intellectual development, emotional development, social development, and moral development. Parents were not equipped for the role of counselling. They were ignorant about the problems faced by their children. So, counselling must be done for solving such problems of adolescents.

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CHAPTER – III

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology indicates the practical way in which the whole research has been organized. It refers to both theoretical and a practical aspects of the study, the problem selected for the study is : “A SOCIAL WORK STUDY ON ADOLESCENT GIRLS IN VIJAYAPURA” which consists the following steps:

- Scope of the Study
- Statement of the Problem
- Conceptual Framework
- Objectives of the Study
- Research Hypotheses
- Operational Definitions
- Universe of the Study
- Research Design
- Variables under Study
- Sampling and Sampling Techniques
- Selection Criteria
- Data Collection
- Data Analysis
- Ethical Consideration
- Limitation

3.2 Scope of the Study

Adolescents are regardedas as the most vulnerable group in human development. Specifically, adolescent girls’ health is a crucial factor that needs to be strengthened to be positive access. In India , adolescents population is growing and their problems related to

health are caused by Indian circumstances like family influences, culture, education system, and religious faiths, etc. They are also affected by psychological-emotional influences and their attitude towards reproductive health.

The present study relates to a study of adolescent girls in terms of social work perspective. The scope of the study includes major features of adolescent girls, reproductive health, healthy eating habits, effect of their family and social environment on reproductive health and healthy eating habits, and the need for guidance and counselling. This study has taken up adolescent girls as a sample in the age range between 17-18 years in Vijayapura district. The district covers five revenue talukas, such as Vijayapura, Sindagi, Indi, Muddebihal, Basavana Bagewadi.

3.3 Statement of the Problem

Traditional norms and beliefs, socio-economic conditions, and physical infrastructure influence the practices related to menstruation. According to cultural traditions, a woman must abstain from cooking and salting food, as it is taboo to do so when menstruating. Women and girls in villages and from poor families cannot get hold of or afford sanitary pads, which would normally be changed around two to four times a day during menstruation. Instead, the majority of women and girls use rags, usually using from old blankets, or chitinges (traditional cotton shawls which Indian women wrap around their necks) and tissue of any kind. The rags are often washed with inadequate and unsafe water and without soap and use it repeatedly. The gender- unfriendly general infrastructure, especially in educational institutions, and the lack of adequate menstrual protection alternatives in terms of clean, safe, and private sanitation facilities for girls in colleges

undermine girls' right to privacy, resulting in a fundamental infringement of their human rights (Patkar & Bharadwaj, 2004). Along with physical changes, teens become more independent as they grow. Dietary options are one of the first decisions, teens start making on their own. However, majority of adolescent girls tend to make poor food choices. Overall, they tend to fail to meet their daily recommended amounts of vegetables and fruits, and whole grains. Also, they often have an increased intake of highly processed foods and drinks that are high in sugar, sodium, and saturated fats.

Adolescent girls are not sustained with a correct and organized education that covers significant development. Education structure provides more importance to intellectual aptitudes to evaluate better perspective, but its failure to quality of life of adolescent girls. In Indian culture, parents are not aware and it is not acceptable for discussing reproductive and sexual matters with their daughters. Even with parents, being believed as the main source of knowledge for forming children while the transition from adolescence to adult, most of the adolescent girls are lacking in getting such information. Providing reproductive health education and nutrition intake in an educational institution is a cost-effective mode of reaching adolescents especially, adolescent girls whose enrollment is increasing in schools and colleges.Generally, adolescent girls gain meagre information related to reproductive health and healthy eating habits in educational institutions. There is a poor knowledge about the understanding of reproductive health and healthy eating habits, inadequate accessibility and affordability of resources supporting utilization of health services in rural areas, and also there is a need of building and adolescent-friendly health care services. It is essential to promote adolescent girls due to their doubts regards to reproductive health especially in rural areas (Kotecha, 2012). The adolescent girls may get

the information regarding reproductive health and nutrition intake from hospitals, health clinics, anganwadis in some aspects (menstruation, personal hygiene) in rural areas.They are mainly dependent on primary health centers. Still, government and private sectors are lacking to sensitize proper knowledge on health services and they are unsatisfactorily managed and are limited. Even, health care providers have not obtained any kind of training related to reproductive health and nutrition-based counselling , they are already overburdened of work and less focused on adolescent girls' health needs.

Large numbers of adolescents are suffering from health issues. It is approximately 2.6 million of the population aged 10-24 years dies each year, which affects on adolescents especially, it burdens their ability to progress their complete potentiality (WHO, 2014). Adolescents are a commonly healthy group but still because the poor implementation of government and non-government programmes, social behaviours and the problem they face without proper care and solutions come out in the effect of their lifestyles. Most of these problems are determined by socio-economic circumstances and lifestyles which affect environment that causes these conditions or behaviours. The quality of public health services in Karnataka is not adequate, these resulting in the improper implementation of the primary health care system. Active integration of health concerns like nutrition, sanitation, hygiene, safe drinking water are still poor. There is an unsatisfactory decentralized supervision at the district level to manage the allocations efficiently and promote policies that support public health management and service delivery (UNICEF, 2008). This might directly affect the health of adolescents particularly adolescent girls in Karnataka. If these particular needs are not focused, there might be chances to develop reproductive and dietary related problems which are neglected and leads further diseases. Therefore, a study is needed to assess adolescent girls knowledge, attitude, and practice regarding

reproductive health and healthy eating habits which are the element of social development and helps in promoting significant health care among adolescent girls and also it promotes future health and support them to grow a better and effective adult life.

As of today due to cross-cultural impact and competitive life scenarios, the life of adolescent girls have turned complex and stressful. Due to socio-family stress and day-to-day complexities of life, adolescent girls need guidance and counseling on reproductive health, menstrual hygiene, and nutrition intake. Observing all these lacunas, the researcher has titled the present study **"*A Social Work Study on Adolescent Girls in Vijayapura*".**

3.4 Conceptual Framework of the Study

A conceptual framework is an analytical tool with several variations, tools, and context through which theories are formulated to explain, predict and understand any phenomenon. It provides clear descriptions of variables, suggesting ways or methods to conduct the study and guiding the interpretations and integration of significant findings (Kothari, 2008). Adolescence is a stage of uncommon challenges and they are exposed to their growth and development which might have long time social effect, keeping this point, the conceptual framework of the present study is prepared to explore the knowledge, attitude, and practice towards reproductive health, healthy eating habits, the effect of family and social environment on reproductive health and healthy eating habits and need for guidance and counselling among adolescent girls. It relates to adolescent girls' significant development based on various demographic factors, views, and education that they obtained through different sources. This may surely influence knowledge, attitude, and practices. Reproductive health and healthy eating habits of adolescent girls are determined

by the kind of platform created to learn and perceive. Family and school education area primary source of information for young girls. They are born, brought up, and influenced by the family environment. They learn social living from their parents, peers, and other significant people. Parents' education and occupation may influence the economic soundness and efficiency to fulfill their basic social needs. A college education is beneficial for pupils to understand the world, to obtain knowledge and skills to live a quality of life. In linking to adolescent girls' health ,family and college are best influential factors to learn their quality of health and personality. Accurate guidance and counselling from significant people can supply a possibility to understand their health, positive behaviours and able to approach a better quality of health.

In order to promote adolescent girls' health programmes related to reproductive health and healthy eating habits which are very much required to bring the quality of health. Research-based studies and programmes can be initiated which help to contribute plans, strategies and implement policies for the betterment of adolescent girls. The role of social work can be resourceful for adolescent girls which make them able to deal with their problems through awareness programmes and counselling. In this perspective, the present study is proposed to find out the need and importance of guidance and counselling, and awareness programmes in reproductive health and healthy eating habits.

The conceptual perspectives on Adolescence, Adolescent Reproductive Health, Healthy Eating Habits, Effect of Family and Environment on Adolescent Girls and the Need for Guidance and Counseling are needed not only in Vijayapura of Karnataka state but, in whole India. In terms of the Vijayapura district, which is the study area, the socio-

economic condition and health facilities may not be too conducive to the proper knowledge of Reproductive Health and Healthy Eating Habits, but seeking medical help in terms of reproductive health have not been noticed as of now. The only reproductive health care treatment received may be in the private parts and/or menstrual-related problems, but these are mostly accessed by elderly women if not married women. Among the adolescent group, the awareness of the risk posed by the reproductive ill-health is very minimal. This is due to the lack of awareness and information in society, ignorance of the people regarding the need for adolescent girls' reproductive health care and not allowing sex education as a part of curriculum need to be taken up in schools and colleges etc.

Addressing the above, there is a need for guidance and counselling. Adolescent counselling is not only for adolescents with personality issues, but is for any child undergoing adolescence that may be confused or overwhelmed. While individual with issues related to their adolescence must undergo counselling, therapies, and awareness programmes which are crucial for any adolescents as it could aid them understanding the changes they are going through and who they are becoming as it addresses basic aspects on adolescence especially, in context to adolescent girls.

3.5 Objectives of the Study

The present study is designed with the following objectives in view:

1. To assess the Knowledge, Practice, and Attitude about Reproductive Health among Adolescent Girls.

2. To know the Knowledge, Practice, and Attitude about Healthy Eating Habits among Adolescent Girls.
3. To find out the effect of Family and Social Environment on Reproductive Health of Adolescent Girls.
4. To study the effect of Family and Social environment on Healthy Eating habits of Adolescent Girls.
5. To suggest the need and importance of guidance and counselling in Reproductive Health and Healthy Eating Habits for adolescent girls.

3.6 Research Hypotheses

Keeping in view the above Specific five Objectives , the following research hypotheses have been set up:

1. There is a positive and significant relationship between Knowledge of Reproductive Health and Practice towards Reproductive Health.
2. There is a positive and significant relationship between Attitude towards Reproductive Health and Practice of Reproductive Health.
3. There is a positive and significant relationship between Knowledge of Healthy Eating Habits and Attitude towards Healthy Eating.
4. There is a positive and significant relationship between Knowledge of Healthy Eating Habits and Practice of Healthy Eating Habits.
5. There is a positive and significant relationship between Family and Social Environment and Reproductive Health.
6. There is a positive and significant relationship between Family and Social Environment and Healthy Eating Habits.
7. There is a significant difference between low and high Socio-Family Environment with regard to the Knowledge of Reproductive Health among adolescent girls.

8. There is a significant difference between low and high Socio-Family Environment with regard to the Practice of Reproductive Health among adolescent girls.
9. There is a significant difference between low and high Socio-Family Environment with regard to the Attitude of adolescent girls towards Reproductive Health.
10. There is a significant difference between low and high Socio-Family Environment with regard to the Knowledge of Healthy Eating Habits among adolescent girls.
11. There is a significant difference between low and high Socio-Family Environment with regard to the Practice of Healthy Eating Habits among adolescent girls.
12. There is a significant difference between low and high Socio-Family Environment with regard to the Attitude of adolescent girls towards Healthy Eating Habits.

3.7 Operational Definitions

3.7.1 Adolescence

Adolescence, a transitional phase of growth and development between childhood and adulthood.

- The transitional period between puberty and adulthood in human development, extending mainly over the teen years and terminating legally when the age of majority is reached; youth.
- The process or state of growing to maturity.
- A period or stage of development, as of a society, preceding maturity.

The World Health Organization (WHO) defines an adolescent as any person between ages 10 and 19.

Jersild defined that, "Adolescence is a span of fears during which boys and girls move from childhood to adulthood mentally, emotionally, socially and physically". In India, Adolescence is a phase that is more difficult to define, particularly in terms of age. The classic age-wise grouping for Adolescence is between 11 to 18 years for girls and between 12 to 18 years for boys.

3.7.2 Reproductive Health

Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and its functions and processes. (WHO)

Reproductive health refers to the condition of male and female reproductive systems during all life stages. These systems are made of organs and hormone-producing glands, including the pituitary gland in the brain. Ovaries in females and testicles in males are reproductive organs, or gonads, that maintain the health of their respective systems. They are also function as a glands because they produce and release hormones.

Disorders in female include:

- Early or delayed puberty
- Endometriosis, a condition where the tissue that normally lines the inside of the womb, known as the endometrium, grows outside of it.
- Inadequate breast milk supply
- Infertility or reduced fertility (difficulty in getting pregnant).
- Menstrual problems including heavy or irregular bleeding.
- Polycystic ovary syndrome, ovaries produce more male hormones than normal.

- Problems during pregnancy.
- Uterine fibroids, noncancerous growth in a woman's uterus or womb.

Reproductive health concerns the effects of social and sexual relationships and behavior on health. In the last decade, it has been recognized that conflict and displacement have a major impact on reproductive health needs.

Reproduction is a biological process by which offspring are produced and is a fundamental feature of all life. Sexual reproduction concerns the production of new, living organisms from two individuals of different sexes. Reproductive health is far broader than this, being a state of physical, mental, and social well-being in all matters relating to the reproductive system.

In this step, Professor Pat Doyle describes the different domains that are included under the term 'reproductive health' and explain why they are important. These domains broadly fall under four groups:

- Having a safe, pleasurable sexual life
- Maintaining a healthy reproductive system
- Bearing children safely
- Avoiding unwanted births.

3.7.3 Menstruation: to have blood flow your body as part of a process that happens each month (Britannica Dictionary).

This is a process in which a woman discharges blood and other material from the lining of the uterus at intervals of about one lunar month from puberty until menopause, except during pregnancy.

A cyclical discharging of blood, secretions, and tissue debris from the uterus that recurs in non-pregnant breeding-age primate females at approximately monthly intervals and is considered to represent a readjustment of the uterus to the non-pregnant state following proliferative changes accompanying the preceding ovulation. In this period, the body discharges blood and mucosal tissue from the uterus, occurring approximately monthly from puberty to menopause in non-pregnant women and females of other primate species.

3.7.4 Premenstrual Syndrome: PMS a medical condition in which a group of characteristic physical and emotional symptoms are felt by women before the onset of menstruation (Britannica Dictionary).

Premenstrual Syndrome is a condition in which some women experience pain and swelling in particular parts of their bodies, and feelings such as anxiety, anger, or unhappiness for a few days before their period or flow of blood each month.

3.7.5 Dysmenorrhea: Dysmenorrhea, pain or painful cramps felt before or during menstruation. Dysmenorrhea may be primary or secondary. Primary is caused by specific imbalnces in the woman's endocrine system during the menstrual cycle. Secondary dysmenorrhea denotes menstrual cramps caused by genital obstructions, pelvic inflammation, abnormal uterine wall separation or development, chronic infection of the uterus (Britannica Dictionary). Dysmenorrhea is 'pain during or just before a woman's period (the bleeding from a woman's womb that happens once a month when she is not pregnant).

3.7.6 Abortion: The expulsion of fetus from the uterus before it has reached the stage of viability (in humans being usually about the 20^{th} week of gestation). In which it is also called a miscarriage. Spontaneous abortions occur for many reasons, including disease,

trama, genetic defect, biochemical incompatability of mother and fetus. Occationaly a fetus dies in the uterus but fails to be expelled, a condition termed a missed abortion (Britannica Dictionary). The term threatened abortion means bleeding in a first trimester pregnancy with a closed cervix and unknown viability.

3.7.7 Hygiene: the science of preserving health. The subject embraces all agencies affecting the physical and mental well-being of humans. It involves in its personal aspect, consideration of diet and consumption of water and sleep, personal cleanliness, and mental health. In its public aspect it deals with climate, soil, materials and arrangement of dwellings, removal of waste matters (Britannica Dictionary).

Hygiene is a series of practices performed to preserve health. According to the World Health Organization, "Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases." Personal hygiene refers to maintaining the body's cleanliness.

3.7.8 Healthy Eating Habits: It involves more on healthy eating and healthy lifestyle, and public education on how to avoid the greatest risks to health (Cambridge Dictionary).

A healthy diet is one that helps maintain or improve overall health. A healthy diet provides the essential nutrition consists of fluid, macronutrients, micronutrients, and adequate calories to the body.

Ten Tips for Healthy Food Habits:

i. Observe the present diet. Consuming less calories in diet, should eat something which is less fattening and easy for body to digest. A couple of minutes spent doing basic yoga/exercise postures will also help to burn those extra calories.

ii. Add green leafy vegetables to diet. They are a rich source of proteins, iron, calcium, and fiber. Green leafy vegetables are easy to prepare and quite appetizing too.

iii. The body receives a significant amount of minerals through water. Drinking plenty of water also helps detoxify the body and gives a glowing skin. However, avoid drinking water during meals as it slows down the digestion process. It is advisable to have water 30 minutes before or after the meal. Learning to drink water correctly forms a strong base for good eating habits.

iv. Proteins are vital for the body and should definitely be included in the diet. Broccoli, soybeans, lentils, asparagus, and spinach are some protein-rich foods. Low-fat dairy products are also a rich source of proteins.

v. Chewingvfood at least 40-60 times. One of the easiest and obvious ways to digest food is to chew it. Most people often eat their food in a hurry and skip chewing their food properly. While what they eat eventually gets digested, but a barely chewed morsel takes more time and tires the digestive system. Besides, the more chewing food, the easier it becomes for stomach to digest it and burn more calories. Small steps like learning to chew correctly go a long way in forming a healthy food habit.

vi. Although it may appease the taste buds, fast food usually does a lot of harm to the body. It can be unhygienic and also high on harmful fats like trans-fats. Also, carbonated soft drinks have a high sugar content which will lead to obesity, diabetes, and dental caries. Instead of these harmful drinks, refresh with a glass of buttermilk or lemonade.

vii. Instead of ordering pizza/burger/other junk foods from the joint around the corner, cooking at home is a very good investment as it lets spend more quality time with family. It's a great way of ensuring that everyone in the family follows healthy food habits.

viii. Most of people have food while texting or watching television, though the stomach might be full, the brain tells to eat more, and eventually end up overeating. If focus only on food then helps to eat only as much as the body requires.

ix. Breakfast is perhaps the most important meal of the day as the body prepares itself for the whole day ahead. Make sure that eat a wholesome and rich breakfast before step out of the house.

x. While knowing what to eat and how much to eat is important, it always helps if it can boost the process of digestion. Sitting in Vajrasna (adamantine pose) for a few minutes after having food helps this yogic posture enhances blood circulation in the lower abdomen and improves the digestive process.

3.7.9 Anemia: Condition in which the red blood cells are reduced in number or volume or are deficient in hemoglobin, in their oxygen- carrying pigment. The most noticeable outward symptom of anemia is usually pallor of the skin, mucous membrances, and nail beds. Anemia results when the destration of red blood cells exceeds production, production of red blood cells is reduced, or chronic blood loss occurs. Reduces production of red cells may be caused by one or more of the nutrients, folic acid, and iron that are necessary for the synthesis of red cells (Britannica Dictionary).

Anemia is a condition in which the red blood cells (erythrocytes) are reduced in number or volume or deficient in hemoglobin which is the oxygen- carrying pigment. The most noticeable outward symptom of anemia is usually pallor of the skin, mucous membranes, and nail beds. The symptom of tissue oxygen. Deficiency includes pulsating noises in the ear, dizziness, fainting, and shortness of breath. Compensatory action of the heart may lead to its enlargement and to a rapid pulse rate.

3.7.10 Knowledge

Knowledge is information and understanding about a subject which a person has, or which all people have.

- The facts, feelings, or experiences known by a person or group of people.
- Specific information about a subject (Britannica Dictionary).

3.7.11 Practice: Practice means doing something regularly in order to be able to do it better. A practice is one of these periods of doing something. Used to describe what really happens as opposed to what you think will happen in a particular situation (Britannica Dictionary).

3.7.12 Attitude

In social psychology, a cognition, often with some degree of aversion or attraction (emotional valence), that reflects the classification and evaluation of objects and events. While attitudes logically are hypothetical constructs (i.e., they are inferred but not objectively observable), they are manifested in conscious experience, verbal reports, overt behavior, and physiological indicators.

- A Person attitude to something is the way that he/she think and feel about it, especially when this shows in the way he/she behaves (Britannica Dictionary).

3.7.13 Family and Social Environment: The family environment "involves the circumstances and social climate conditions within families. Since each family is made up of different individuals in a different setting, each family environment is unique. The environments can differ in many ways.

The word 'Family' has been taken from the Roman word 'famulus' meaning a servant. Family is an enduring association of parent and off-springs whose primary function are the socialization of the child and satisfaction of the members. However, to understand the influence of the family on the child, it is important to understand family and its functions. Family has been defined in the Oxford Dictionary as:

- The body of persons, who live in one house or under one head, including parents, children, servants etc.
- The ground consisting of parents and their children, whether living together or not.
- A person's children reared collectively.
- Those descended or claimed descent from a common ancestry.

A family is a child's first experience of relationships generally occurs within the family. It is a small intimate group of basic setting within which most children come in contact with society where they learn how to behave within a society and outside world.

3.7.14 Social Environment: the environment developed by humans as contrasyed with the natural environment: society as a whole, specially in its relation to the individual (Britannica Dictionary).

The social environment, social context, socio-cultural context, or milieu refers to the immediate physical and social setting in which people live or in which something happens or develops. It includes the culture that the individual is educated or lives in, and the people and institutions with whom they interact. Conceptualizing health as a product, in part, of social conditions facilitates the identification of relationships between social determinants and health outcomes that may be amenable to community interventions.

3.7.15 Guidance: help and advice about how to do something or about how to deal with problems connected with your work, education or personal relationships (Cambridge Dictionary).

Guidance and counseling is the process which helps the person to know their skills, interests, personality that will help them in further career selection. Guidance is the process

in which person able to know their ability, interest, and a capacity that will help in solving the problems faced by them.

Adolescents are often insecure and have problems in articulating their obvious needs due to on going changes. Sometimes, family members or friends try to help the adolescent to adjust. But, especially with the beginning of sexuality, questions arise where family members and friends refuse to talk. There might be questions related to sexual protection, unplanned adolescents' pregnancies, sexually transmitted diseases like HIV/AIDS, menstrual health problems and hygiene. In general, adolescent reproductive health will be defined, not only as the absence of disease, but also as a state of physical, mental and social well-being. Teachers can help to prevent some of the problems by means of careful and open education. They can also help adolescents to find their personal and sexual identity. This module will provide crucial information and will propose practical guidance and counselling for teaching about this sensitive subject (Adolescent Health and Development Project).

3.7.16 Counselling: the job or process of listening to someone and giving that person adcice about their problems. Professional counselors and counselling psychologist are commonly found in institutional settings such as high schools and colleges, private industry, community agencies, prisons and the military, as well as in private practice. They are often called on to help individuals to deals with the grief of unexpected tragedies (Britannica Dictionary).

3.8 The universe of the Study

The whole population, out of which the samples are selected, is known as "Universe". It is the area in which the research of study is to be conducted. Universe can be

understood as the total of aggregate to all units' cases that conform to some designed set of the specification is called the universe or population. In the present study, the sample consist of 1766 universe comprised of all the Governemnt Pre-University college-going adolescent girls in a senior classes (IInd year class) in Vijayapura district.

3.8.1Unit of the Study

The unit of the study is the adolescent girls which covered the five revenue talukas of Vijayapura district which are Vijayapura, Indi, Basavana bagevadi, Sindagi and Muddebihal.

3.9 Research Design

Under this subheading, the research method adopted in the present study has been discussed in detail. Design is the procedure or technique adopted in a research study. The design occupies a very important position in research. It lays out the way that formal research is to be carried out and outlines the detailed description of the research and procedure. In an investigation, requiring the use of quantitative method, statements should be made of the number of kinds of subjects used, the instruments employed, and other kinds of information. In order to take up any problem, proper methods should be selected in advance. The decision about the method depends on the nature of the problem selected and the kind of data necessary for its solution (Krishnaswami 2016).

The descriptive method has been used in the present study. A descriptive study describes and interprets what is. It is concerned with considerations or relationships that exist opinions that are held, processes that are going on, evident effects, or trends that are developing. It is primarily concerned with the present, although it often considers past events and influences as they relate to current conditions.

3.10 Variables of the Study

A concept that can take on different quantitative values is called a variable. Variables are necessary requisites for any worthwhile research for the purpose of comparison. If one variable depends upon or is a consequence of the other variable, it is termed as a dependent variable and the variable that is antecedent to the dependent variable is termed as an independent variable. Independent variables that are not related to the purpose of the study, but may affect the dependent variable (Krishnaswami 2016). The following variables have been considered in the present study:

3.10.1Independent Variables

i. Religion
ii. Parents' Education
iii. Parents' Occupation
iv. The income of the family
v. Type of family
vi. Family Environment
vii. Social Environment

3.10.2Dependent Variables

i. Reproductive Health (Knowledge, Practice and Attitude)
ii. Knowledge, Practice, and Attitude about Healthy Eating Habits

3.11 Sample of the Study

Descriptive field studies require the collection of first-hand information or data of the units of study from the field. A part of the population is known as a sample. "The process of drawing a sample from a larger population is called sampling".

- The quality of a study is often better with sampling than with complete coverage. The possibility of better interviewing, a more thorough investigation of missing,

wrong, or suspicious information, better supervision, and better processing is greater in sampling than incomplete coverage.

- Sampling provides much quicker results than a census. The speed of execution minimizes the time between the recognition of a need for information and the availability of that information
- Sampling is the only procedure possible if the population is infinite (Krishnaswami, 2016).

The present study is conducted in five revenue talukas of Vijayapura district, namely, Vijayapura, Indi, Sindagi, Basavanabagevadi, and Muddebihal. The study covered adolescent girls studying in government Pre-University colleges which are located in urban and rural areas of Vijayapura district.

3.11.1 Sampling Technique

Due to pandemic of COVID-19, the researcher opted for her convenience for the study purpose and used non-probability sampling method such as the purposive sampling technique. Purposive sampling is the deliberate selection of sample units that conform to some pre-determined criteria. It is based on the judgment of the researcher. Purposive sampling is typically used in descriptive and qualitative studies, it is the best method for the present study because of the spread of the COVID-19 pandemic period as it is suitable in collecting the data in such times.

3.11.2 Sample Description

In the present study, total population of adolescent girls were 1766 , from which 300 adolescent girls were taken under the studying (II^{nd}year class) from Pre-University colleges distributed in urban and rural areas of the district. Further, while selecting the sample, adolescent girls representing higher socio-economic status and lower socio-

economic status were covered. The list of the population was drawn as following table-1 from the five talukas.

Table – 1 The Distribution of Adolescent Girls Population from five talukas

SL. NO	Name of the Talukas	Total No. of Students	Total No. of Adolescent Girls	Total No. of Respondents
1	Vijayapura	1814	768	100
2	Indi	416	198	58
3	Sindagi	262	178	54
4	BasavanaBagewadi	341	296	48
5	Muddebihal	647	326	40
	Total	3480	1766	300

3.11.3 Criteria for Sample Selection

- Locality - urban, and rural areas
- Revenue Talukas - Vijayapura, Indi, Sindagi, Basavanabagevadi, and Muddebihal.

3.11.4 Selection of Colleges The important 20 colleges were drawn for the present study which shown in the following table-2 .

Table-2 The name of Pre-University Colleges and No. of Respondents from five talukas

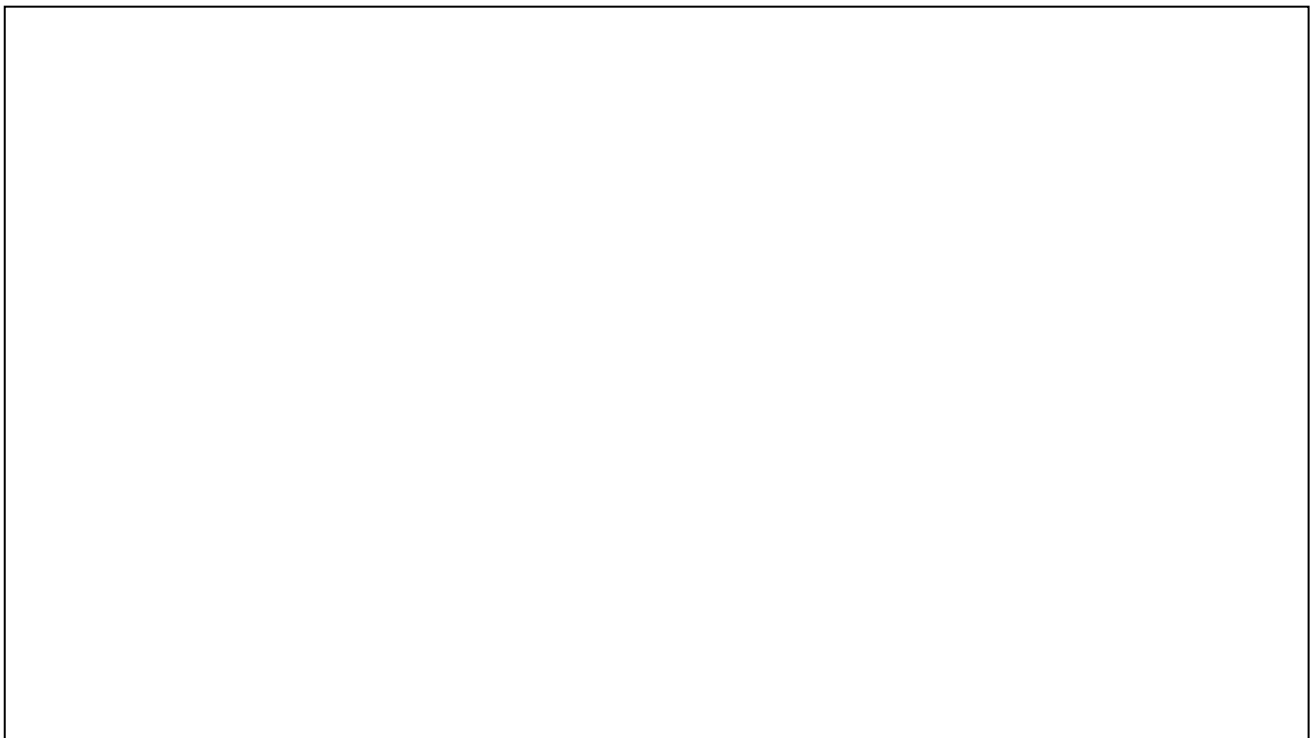
Sl. No.	Name of College	No. of Respondents
1.	Girls Govt. P U College, Vijayapura.	55
2.	Murarji Residential P U College, Vijayapura.	6
3.	Govt. P U College, Nagatana, Vijayapura.	4

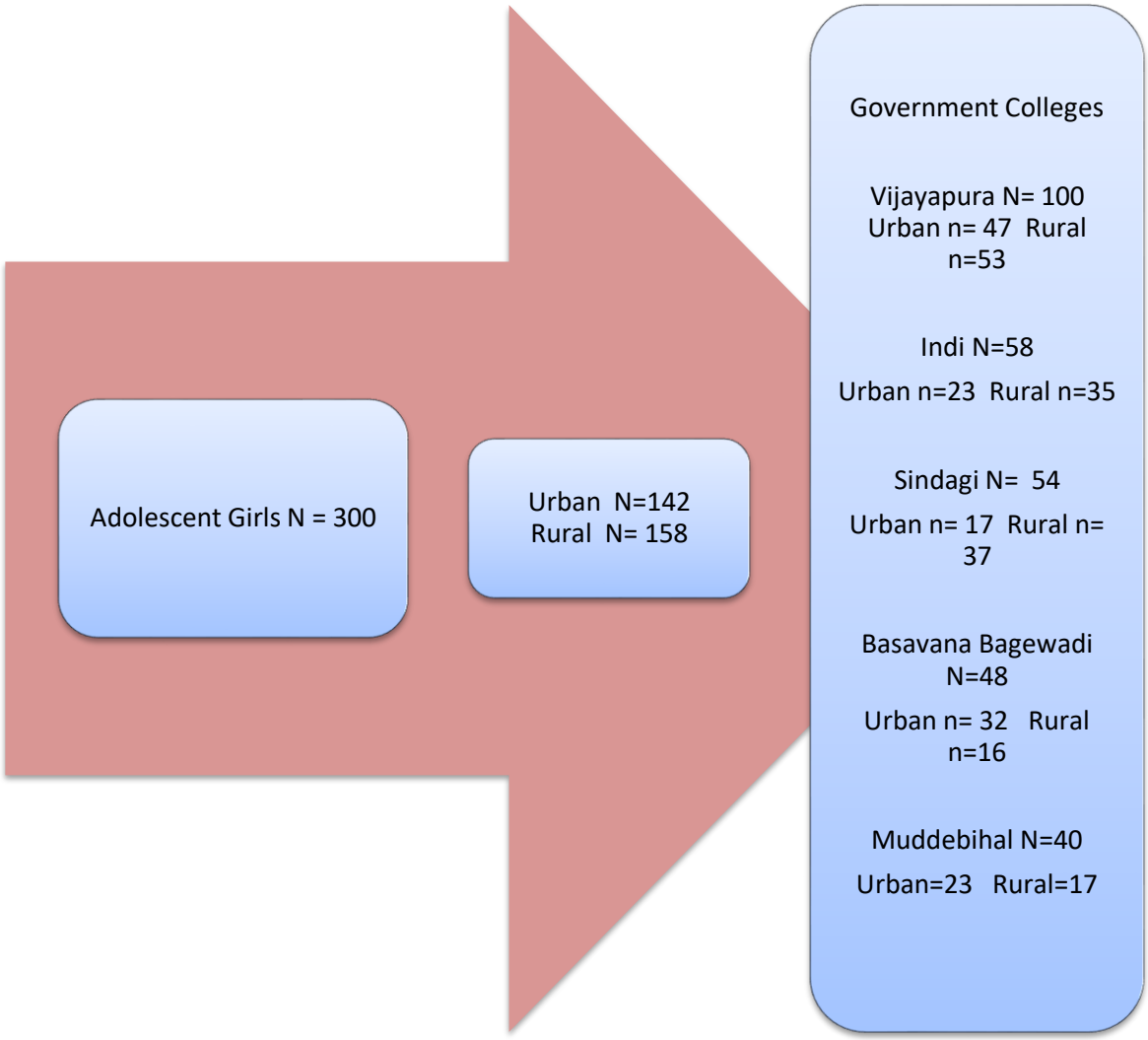
4.	Govt. P U College, Kaggoda, Vijayapura.	3
5.	Govt. P U College, Kannur, Vijayapura.	2
6.	Govt. P U College, Honnutagi, Vijayapura.	15
7.	Murarji Girls Residential P U College, Arakeri, Vijayapura.	15
8.	Govt. P U College, Indi.	35
9.	Govt. P U College, Golasaar, Indi.	5
10.	Govt. P U College, Lachyana, Indi.	8
11.	Govt. P U College, Halagunaki, Indi.	8
12.	Murarji Desai Residential Science P U College, Maraguru, Indi.	2
13.	Govt. P U College, Sindagi.	48
14.	Govt. P U College, Yankanchi, Sindagi.	6
15.	Girls Govt. P U College, Basavana Bagevadi.	26
16.	S. T. Govt. P U College, Basavana Bagevadi.	15
17.	Govt. PU College, Jayawadagi, BasavanaBagevadi.	5
18.	Govt. P U College, Muttagi, Basavana Bagewadi.	2
19.	Govt. P U College, Muddebihal.	30
20.	Govt. P U College, Basarakoda, Muddebihal.	10
	Total	300

3.11.4 Selection of Students

Total 300 adolescent girls formed for the study. The sample consisted of 142 urban adolescent girls and 158 rural adolescent girls distributed in five talukas of the Vijayapur district. The distribution of the sample is as shown below chart-3.

Chart-3.1The Samples collected from five talukas of Vijayapura District





3.12 Selection Criteria

3.12.1 Inclusion Criteria

- Adolescent girls studying in government Pre-University colleges, IInd year going from five talukas of rural and urban areas were selected.
- Age group of 17-18 years.

3.12.2 Exclusive Criteria

- Aided, unaided, corporation colleges, Ist year going students and boys were excluded.
- Married Adolescent Girls
- Agolescent girls age group of 10-16 years and 19 yaers.

3.13 Collection of Data

Both Primary and Secondary sources of data were utilized.

3.13.1 Primary Data: In order to collect primary data, questionnaire tool were developed and administered to the selected sample. It consists of information regarding the knowledge, practice and attitude about reproductive health; the knowledge, practice and attitude about healthy eating habits; the family and social environment of adolescent girls and need for guidance and counselling in reproductive health and healthy eating habits among adolescent girls.

3.13.2 Secondary Data: Secondary data was collected from different sources, such as, journals, books, documents, reports of Central and State Governments, various publications of international bodies, e-resources and websites. It consists of information regarding the reproductive health; healthy eating habits; the family and social environment of adolescent girls; and need for guidance and counseling in reproductive health and healthy eating habits for the adolescent girls.

In addition, the research papers pertaining to reproductive health published in International and National journals were also included. It consists of the following;

- Reports of the Government and other agencies.
- Reference and Text books.

- Working papers and other Research papers available on the World Wide Web.
- The particulars of references are documented in the bibliography.

3.13.3 Pilot Study

A pilot study is a "small scale replica" of the main study. It is the rehearsal of the main study. It covers the entire process of research. Preparation of broad plan of the study, construction of tools, collection of data, processing and analysis of data and report writing (Krishnaswami 2016).

The pilot study was conducted mainly to test the probability, standardization validity and reliability of the tools. After obtaining permission from the concerned authority conducted on 50 adolescent girls. Duration of the pilot study was two weeks. The structured questionnaire was scrutinized for its content validity by subject experts and statistician. After necessary modifications, the final tool consisted of 08 items in the Personal Profile. It was used to find out e the constructed tools were appropriate and convenient to apply or not to collect data from the study population, where it was tested on respondents ages 17-18 years from Government Girls Pre-University college ofVijayapura city. The results revealed that the reliability of the questionnaire was very much appropriate and applicable to Pre-University girls students. The pilot study was conducted to make sure that respondents understand the instructions or not, the questions being asked and the language used.All these help in making the clarity among adolescent girls.

3.13.4 Validity

Validity is the effectiveness of an instrument in measuring the specific property which it intends to measure. Measurement of abstract properties like attitude, morale, motivation etc, is indirect and gives rise to the problem of validity. It becomes necessary to

gather some sort of evidence to show that the concerned measuring instrument does work, in fact, it measures what it supposed to in the present study; the validity of the tool was prepared in consultation with the guide and experts in the field of social work (Krishnaswamy 2016).

In this study, the validity of the questionnaire was determined by regular discussions with a statistician. Based on the results of pilot study and also through the numerous feedback from subject experts from the 'education' and 'health' fields (Professors, department of Social Work, Food and Nutrition, and trained Counsellors). All the suggestions were duly considered and modifications were made.

3.13.5 Reliability

Reliability is the ability of a measuring instrument to give an accurate and consistent result. Measuring instrument is reliable if it provides consistent results. Reliable measuring instrument thus contribute to validity (Krishnaswami 2016).

Before the actual data gathering exercise, a reliability test is done on the data collected from the pilot study. The outcome of this study concluded a new set of the questionnaire used for the actual study. To test the reliability of the questionnaire, it was measured by Cronbach's Alpha test and the reliability was 0.860 which shows that the questionnaire was reliable.

3.13.6 Data Gathering Tools

For the purpose of the present study, the researcher has prepared tools with the help of guide and experts by conducting the pilot stud consists of 150 statements which include:

I. Knowledge, Practice and Attitude about Reproductive Health (RH) among Adolescent Girls.
   a) Knowledge about Reproductive Health.

b) Practice of Reproductive Health among Adolescent Girls.

c) Attitude of Reproductive Health among Adolescent Girls.

II. Knowledge, Practice and Attitude about Healthy Eating Habits.

a) Adolescent Girls Knowledge on Healthy Eating Habits.

b) Practice on Nutrition and Healthy Eating Habits.

c) Attitude on Healthy Eating Habits.

III. The Effect of Family and Social Environment on Reproductive Health.

IV. The Effect of Family and Social Environment on Healthy Eating Habits.

V. Need and Importance of guidance and counselling in Reproductive Health and Healthy Eating Habits for Adolescent Girls.

Each statements of the tool have been rated on the five point of agreement as shown below;

a) Strongly Agree

b) Agree

c) Undecided

d) Disagree

e) Strongly Disagree

I. Demographic Profile

This tool is prepared to obtain information from the respondents on the following areas – Locality (Rural, Urban), Religion (Hindu, Muslim, Christian, and Others), Parent's Education and Occupation, Type of family (Joint, Independent, and Nuclear), Family income.

II.The tool for Knowledge, Practice and Attitude – Reproductive Health

a) Tool to assess knowledge- Reproductive Health consists of 20 items

b) Tool to assess Practice- Reproductive Health consists of 12 items

c) Tool to assess Attitude- Reproductive Health consists of 12 items

This tool was prepared by the researcher herself to study the level of knowledge, practice and attitude perceived among adolescent girls, the following areas were assessed: Pubertal changes (physical, psychological and social), menstruation and hygiene, Reproductive health system, pregnancy, abortion, about HIV/AIDS, Reproductive health diseases, Reproductive Tract Infections and importance of Reproductive health services. The tool consists of five responses- Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree.

II.1 Scoring

Measured variables for knowledge, practice, and attitude towards reproductive health among adolescent girls were presented to interpret data and score as 'Strongly Agree' responses were scored at a value of five, 'Agree' responses were given a score of four, 'Undecided' responses were given three, 'Disagree' responses had a value of two and one score was assigned to 'Strongly Disagree'. Among these items, reverse scores were adopted where 'Strongly Agree' one point, 'Agree' two points, 'Undecided' three points, 'Disagree' responses had a value of four and five was assigned for 'Strongly Disagree'. In this scoring, maximum possible score was two hundred twenty and the minimum score was forty four.

The scores obtained between 181-220 (81-100%) indicated excellent knowledge, practice and attitude. Scores between 137- 179 (61- 80%) as good knowledge, practice, and attitude, between 92- 134 (41- 60%) as moderate knowledge, practice, and attitude, between 47- 89 (21- 40%) as poor knowledge, practice, and attitude and scores 0- 45 (0- 20%) as very poor knowledge, practice, and attitude.

III.The tool for Knowledge, Practice and Attitude- Healthy Eating Habits

a) Tool to Assess Knowledge – Health Eating Habits, 12 items

b) Tool to Assess Practice- Healthy Eating Habits, 15 items

c) Tool to Assess Attitude- Healthy Eating Habits, 19 items

The general healthy intake and healthy eating habits schedule was prepared by the researcher in the following areas- nutrition intake, types of nutrition intake, nutritional measurement indicators, vitamins, importance of fruits and vegetables intake, fast food supplement, nutritional health problems and importance of health services. The tool consists of five responses- Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree.

III.1. Scoring

Measured variables for knowledge, practice and attitude towards healthy eating habits were presented to interpret data and score as 'Strongly Agree' responses which scored at a value of five, 'Agree' responses were given a score of four, 'Undecided' responses were given three, 'Disagree' responses had a value of two and one score was assigned as 'Strongly Disagree'. Among these items, reverse scores were adopted where 'Strongly Agree' one point, 'Agree' two points, 'Undecided' three points, 'Disagree' responses had a value of four and five was assigned for 'Strongly Disagree' in this scoring the maximum possible score was two hundred thirty and the minimum score was forty six.

The scores obtained between 186-230 (81-100%) indicated excellent knowledge, practice, and attitude.Scores between 140-184 (61-80%) as good knowledge, practice, and attitude, between 94-138 (41-60%) as moderate knowledge, practice, and attitude, between 48-92 (21-40%) as poor knowledge, practice, and attitude and scores between 0-46 (0-20%) as very poor knowledge, practice, and attitude.

V. The tool for Family and Social Environment – Reproductive Health

The tool consisted of 20 items related to the effect of the family and social environment of adolescent girls on their reproductive health. The statements were prepared to understand the family and social environment towards reproductive health of adolescent girls were presented to interpret data and score as 'Strongly Agree' responses were scored at a value of five, 'Agree' responses were given a score of four, 'Undecided' responses were given three, 'Disagree' responses had a value of two and one score was assigned to 'Strongly Disagree'. Among these items , reverse scores were applied where 'Strongly Agree' one point, 'Agree' two points, 'Undecided' three points, 'Disagree' responses had a value of four and five was assigned to 'Strongly Disagree'. Maximum possible score was one hundred and the minimum score was twenty.

The scores obtained between 81-100 (81-100%) indicated high family and social environment, between 61-80 (61-80%) indicated good, scores obtained between 41-60 (41-60%) as moderate and scores obtained between 21-40 (21-40%) as poor, and scores obtained between 0-20 as very poor family and social environment towards reproductive health.

VI. The tool for Family and Social Environment –Healthy Eating Habits

The tool consisted of 20 items related to effect of the family and social environment of adolescent girls on their eating habits. The statements were prepared to understand the family and social environment towards healthy eating habits of adolescent girls which were interpreted and scored, for 'Strongly Agree' responses ,value of five was scored , for 'Agree' responses, score of four, for 'Undecided' responses, score of three was given, for 'Disagree' responses, a value of two and one score was assigned to 'Strongly Disagree' respectively. Among these items, reverse scores were adopted where 'Strongly Agree' one point, 'Agree' two points, 'Undecided' three points, 'Disagree' responses had a value of

four and five scores for 'Strongly Disagree' responses. Maximum possible score was one hundred and the minimum score was twenty.

The scores obtained between 81-100 (81-100%) indicated high family and social environment, between 61-80 (61-80%) indicated good, scores obtained between 41-60 (41-60%) as moderate and scores obtained between 21-40 (21-40%) as poor, and scores obtained between 0-20 as very poor family and social environment towards reproductive health.

VII.The tool for Need and Importance of Guidance and Counselling regard to Reproductive Health and Healthy Eating Habits

The tool consisted of 20 items related to the need and importance of guidance and counselling on reproductive health and healthy eating habits. The statements were prepared to understand the family and social environment towards reproductive health and healthy eating habits of adolescent girls which interpreted data and score as 'Strongly Agree' responses were scored at a value of five, 'Agree' responses were given a score of four, 'Undecided' responses were given three, 'Disagree' responses had a value of two and one score was assigned to 'Strongly Disagree'. Among these items reverse scores were applied where 'Strongly Agree' one point, 'Agree' two points, 'Undecided' three points, 'Disagree' responses had a value of four and five was assigned for 'Strongly Disagree' responses. Maximum possible score was one hundred and the minimum score was twenty.

The scores obtained between 81-100 (81-100%) indicated high family and social environment, between 61-80 (61-80%) indicated good, scores obtained between 41-60 (41-60%) as moderate and scores obtained between 21-40 (21-40%) as poor, and scores obtained between 0-20 as very poor family and social environment towards reproductive health.

3.13.7 Data Collection Method

Data collection is the generating or bringing together of information that has been systematically observed, recorded, organized, categorized, or defined in such a way that logical processing and inferences may occur. The data collection was collected from the academic year 2020-21. The sample was selected according to the selection criteria of the study. Once the data questionnaire was ready to assess adolescent girls Pre-University IInd year students, the researcher visited the DDPU (Deputy Director of Pre-Universities) of Vijayapura district to seek permission for the research and also collected the data of the total number of students who were enrolled in the academic year of 2020-21. After acquiring permission from the DDPU, the researcher visited various government pre-university colleges (only visited five talukas) to meet principals to seek permission for assessing girl students and collected a list of students of the particular college. Due to the COVID-19 pandemic,the researcher according to her convenience assessed the girl students based on the permission given by the principals and data was collected through the home to home survey. II PUC girl students were taken up as a respondents belong to arts, commerce, and science streams and who were present on particular day for the sample collection. Before collecting the data, they were informed about the procedure and permission was obtained from the respondents and explained to them the purpose of the study. Confidentiality of the data obtained was ensured. The assessment was done through self-administered questionnaire on knowledge, practice, and attitude towards reproductive health, healthy eating habits, the effect of family and social environment on reproductive health and healthy eating habits and need as well as importance of guidance and counselling.

3.14 Data Analysis

The analysis of data is the most skilled task in the research process. It is a critical examination of the assembled data for studying the characteristics of the object under study and for determining the patterns of relationships among the variables relating to it. The quantitative data was collected with regard to knowledge, practice, and attitude of reproductive health and healthy eating habits, the effect of family and social environment and the need of guidance and counselling. In this study, the collected data was analyzed using both descriptive and multivariate statistical methods.

3.14.1 Statistical Techniques

The analysis was carried out on the basis of objectives of the investigation and hypotheses formulated by employing appropriate statistical techniques.

	Statistical Techniques	Purpose
1	Correlation Coefficient	Deals with the simple correlation in between the variables of reproductive health and healthy eating habits and their components – knowledge, practice, and attitude. (In order to test Hypotheses – 1 to 6, Pearson Product Moment correlation coefficients were computed and 't' test was employed for testing the significant 'r'.The relationship between knowledge, attitude and practice regarding Reproductive Health as well as Healthy Eating Habits among adolescent girls was tested).
2	Deferential Analysis	Deals with the comparison of Reproductive Health and Healthy Eating Habits and their components – knowledge, practice and attitude on demographic variables, viz., location, religion, type of family and SES

		(socio-economic status). (In order to test Hypotheses – 7 to 12, the 't'test was used to find out the difference in the knowledge, practice and attitude of adolescent girls towards reproductive health ; healthy eating habits belonging to low and high socio-family environment).
3	Multiple RegressionAnalysis	Deals with the relative contributions of components, such as, knowledge, practice and attitude of Reproductive Health as well as Healthy Eating Habits. (In order to test Hypotheses- to find the relative contributions of components, such as, knowledge, practice, and attitude of Reproductive Health as well as Healthy Eating Habits).
4	Analysis of Variance (ANOVA)	In order to test Hypotheses - to deals with the interaction effects of components like knowledge, practice, and attitude on Reproductive Health and Healthy Eating Habits.

(Kothari 2004)

3.15 Ethical Consideration

- ✓ The selected respondents were explained the purpose of the study and also informed about participation in the study was purely voluntary.
- ✓ The questionnaire was translated in Kannada.
- ✓ Respondents willing to participate were selected.
- ✓ Informed consent was taken from the concerned college authority and management.
- ✓ Confidentiality was maintained and each respondent was assured of confidentiality.

3.16 Limitation of the Study

- ❖ The research was limited to government Pre-University college going adolescent girls.
- ❖ The research was limited to the age group of 17-18 years old.

- Some of the respondents relucted and hesitated to give their consent.
- Due to the COVID-19 pandemic period ,colleges were not opened, in that critical

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time ,data has been done through home visits and faced difficulty to collect information from adolescent girls.

- Some respondents felt hesitation to give their opinion in the presence of their parents. Taken more time to make the respondents feel comfortable for collection of the. These show the parents were not close with their daughter in related to reproductive health.

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CHAPTER IV

GEOGRAPHICAL PROFILE OF THE VIJAYAPURA DISTRICT

4.1 Introduction

In this chapter, an attempt has been made to present a synoptic view of profile of the Vijayapura district and to trace out the Reproductive Health and Eating Habits of Adolescent Girls in Vijayapura followed by a brief introduction of the unit of the present study, i.e. “A Social Work Study on Adolescent Girls in Vijayapura”.

The term adolescence is the period of transition from dependence to self-dependence (Crow 1956). Adolescence is generally considered to include the years between the onset of puberty or approximately from age 11 through age 19 years this is the age when sexual and mental maturity is reached. However the age at which adolescents attain emotional and social maturity varies with individual. Understanding the characteristics, needs, interests, problems and growth potentialities of maturing adolescents can help them experience a gradual and relatively peaceful development from early childhood to adulthood.

The conceptual perspectives on Adolescence, Adolescent Reproductive Health, Healthy Eating Habits, Effect of Family and Environment on Adolescent Girls and Need for Guidance and Counselling are needed not only in Vijayapura of Karnataka state, but in the whole of India. In terms of Vijayapura district, this is the study area, the socio-economic condition and health facilities may not be too conducive to the proper knowledge of Reproductive Health and Healthy Eating Habits, but seeking medical help in terms of reproductive health have not been noticed as yet. The only reproductive health care treatment received may be in the private parts and/or menstrual related problems but these cares are mostly accessed by elderly women if not married women. Among the adolescent group the awareness of the risk posed by the reproductive ill-health is very minimal. This is

due to the lack of awareness and information in the society, ignorance of the people regarding the need for adolescent girls reproductive health care, not allowing sex education to be taken up in schools etc. however, the elders in the society have to realize that Adolescent Reproductive and Sexual Health (ARSH) care goes way beyond the context of sex alone there are many other factors apart from sexual indulgence which leads to adolescent reproductive ill-health.

Addressing the above, we need guidance and counselling. Adolescent girls counselling is not only for them with personality issues but is for any child undergoing adolescence that may be confused or overwhelmed. While it is important that kids with issues related to their adolescence undergo counselling, this form of therapy is crucial for any adolescents as it could help them understand the changes they are going through and who they are becoming as it addresses basic aspects pertaining to adolescence, especially in context to adolescent girls.

4.2 Origin and History of Vijayapura

The name 'Vijayapura' is derived from 'Vijapur' in Kannada, which is the short form of the Sanskrit term 'Vijayapura meaning 'city of victory'. It is not known when exactly the place was named Vijayapura and which victory it was intended to perpetuate.

Vijayapura District is a district in the state of Karnataka in southern India. The city of Vijayapura is the headquarters of the district, and is located 530 km northwest of Bengaluru. Vijayapura is renamed as Vijayapura now. Vijayapura is well known for the great monuments of historical importance built during the Adil Shahi dynasty. Vijayapura urban population as per 2011 census is 326,000, perhaps the 9th biggest city in Karnataka.

Vijayapura Mahanagara Palike (VMP) is the newest Municipal Corporation formed under the KMC act along with Shivamogga and Tumakuru Municipal Corporations. The other existing city corporations in Karnataka state in descending order of population are Bengaluru, Hubballi-Dharawada, Mysuru, Kalaburgi, Belagavi, Mangaluru, Davangere and Ballari. Administratively, Vijayapura district comes under Belgaum division along with Bagalkote, Belgaum, Dharwad, Gadag, Haveri and Uttara Kannada (Karwar) districts. Vijayapura, the land of five rivers and the domain of different cultures, is an ancient city. The city established in the 10th and 11th centuries by the Chalukyas of Kalyani was known as Vijayapura (City of victory). Vijayapura was the biggest district place of the state with 11 taluks, but the partition of the district in 1997 made it to lose that title. Now it consists of five taluks viz. Basavan Bagevadi, Vijayapura, Indi, Muddebihal and Sindagi.

While archaeological evidence indicates that the area was settled by the late Paleolithic, the legendary founding of the city of Vijayapura was in the late 900s under Tailapa II, who had been the Rashtrakutan governor of Tardavadi, and after the destruction to the empire caused by the invasion of the Paramara of Malwa, declared his independence and went on to found the empire of the Chalukyas of Kalyani, where the city was referred as Vijayapura ("City of Victory"). By the late 13th century, the area had come under the influence of the Khilji Sultanate. In 1347, the area was conquered by the Bahmani Sultanate of Gulbarga. By this time the city was being referred as Vijapur or Vijayapura.

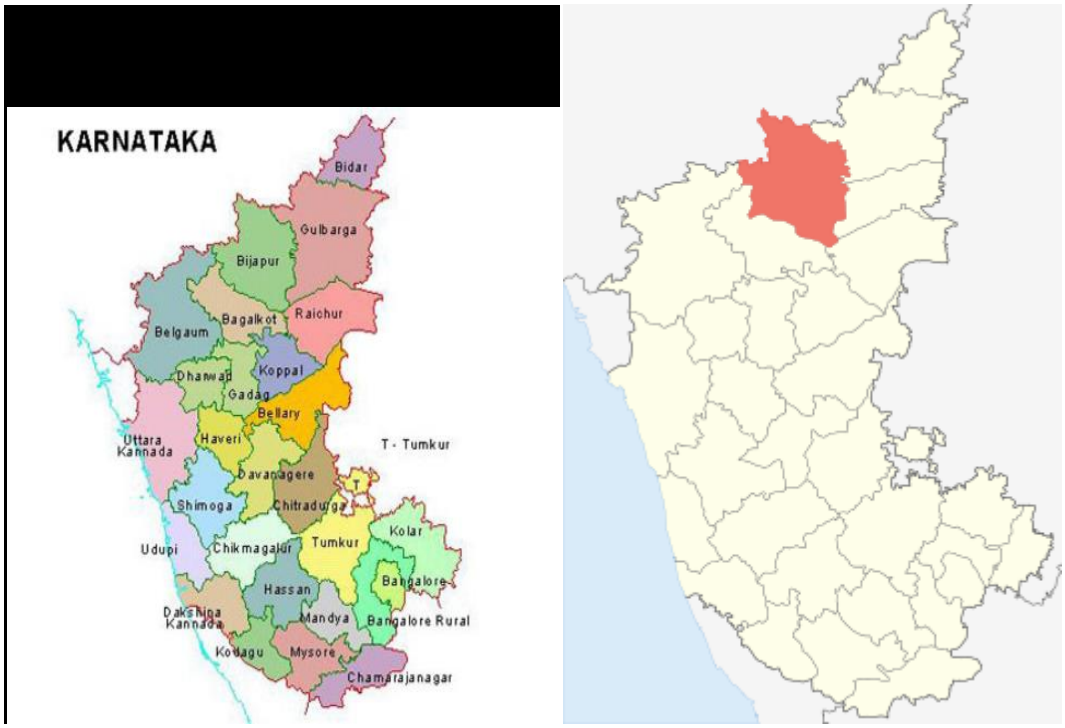
A Brief Historical Background: In 1518, the Bahmani Sultanate split into five splinter states known as the Deccan sultanates, one of which was Vijayapura, ruled by the kings of the Adil Shahi dynasty (1490–1686). The city of Vijayapura owes much of its greatness to Yusuf Adil Shah, the founder of the independent Vijayapura Sultanate. The rule of this

dynasty ended in 1686, when Vijayapura was conquered by the Mughal emperor Aurangzeb. In 1724 the Nizam of Hyderabad established his independence in the Deccan, and included Vijayapura within his dominions. In 1760, the Nizam suffered a defeat by the Marathas, and ceded the region of Vijayapura to the Maratha Peshwa. After the 1818 defeat of the Peshwa by the British in the Third Anglo-Maratha War, Vijayapura passed into the hands of the British East India Company, and was assigned to the princely state of Satara.

In 1848 the territory of Satara, along with Vijayapura, was annexed to Britain's Bombay Presidency when the last ruler died without a male heir. The British carved a new district by the name Kaladagi. The district included present-day Vijayapura and Bagalkot districts. Vijayapura was made the administrative headquarters of the district in 1885, when the headquarters were moved from Bagalkot. After India's Independence in 1947, the district became part of Bombay state, and was reassigned to Mysore state, later Karnataka, in 1956. The former southern taluks of the district were separated in 1997 to form Bagalkot District.

The citadel, built by Yusuf Adil Shah, a mile (2 km) in circuit, is of great strength, well-built of the most massive materials, and encompassed by a ditch 100 yards wide, formerly supplied with water, but now nearly filled up with rubbish, so that its original depth cannot be discovered. Within the citadel are the remains of both Hindu temples and old mosques, which prove that Vijayapura was an important town. The fort, which was completed by Au Adil Shah in 1566, is surrounded by a wall 6 m. in circumference. This wall is from 30 to 50 ft (10 to 15 m) high, and is strengthened with 96 massive bastions of various designs. In addition there are ten others at the various gateways. The width is about 25 ft (8 m); from bastion to bastion runs a battlemented curtained wall about 10 ft (3 m)

high. The whole is surrounded by a deep moat 30 to 40 ft (10 to 12 m) broad. Inside these walls the Vijayapura kings bade defiance to all comers. Outside the walls are the remains of a vast city, now for the most part in ruins, but the innumerable tombs, mosques, caravanserais and other edifices, which have resisted the havoc of time, afford abundant evidence of the ancient splendour of the place. Badami, Aihole, and Pattadakal, near Vijayapura, are noted for their historical temples in the Chalukyan architectural style. Vijayapura district is historically, traditionally and legendarily, one of the richest districts in the state. The evidence found here reveals that it was an inhabited place since the Stone Age. Many places of this district have legendary history. The history of this district is divided into four periods, from the Chalukya acquisition of Badami till the Muslim invasion.



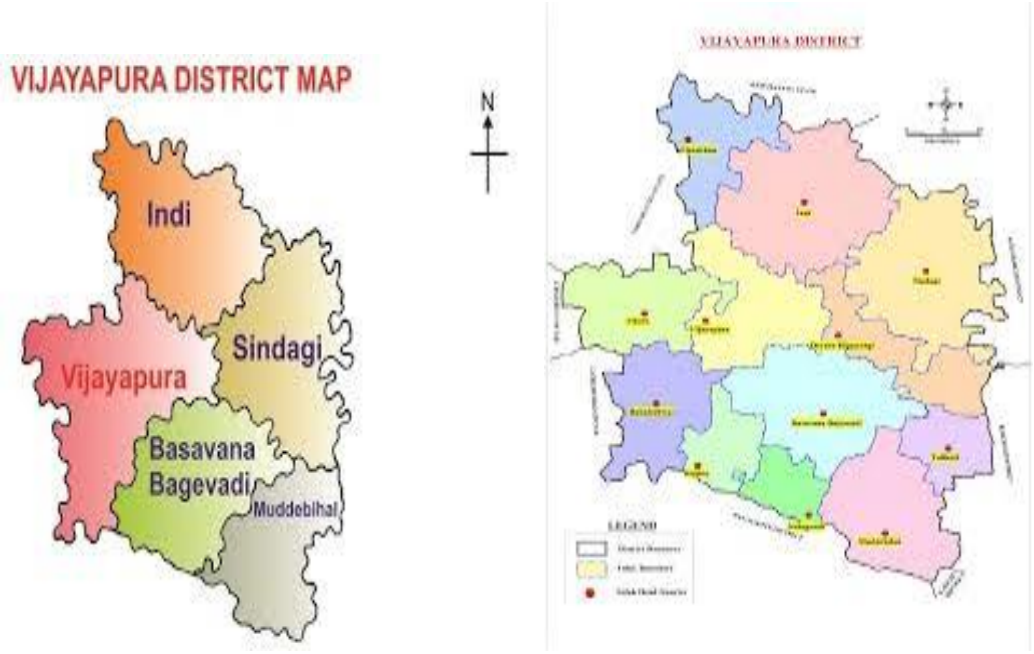


Table – 4.1: The general information of the district

Sl. No.	Particulars	Vijayapura District
01	Area (sq kms)	10541
02	Population:	21,77331
	Male	11,1,122
	Female	10,66,309
	Rural	16,75,353
	Urban	501978
03	Adolescence Population: Age of 10-19 years	4,54,313
	Rural	3,49,805
	Urban	1,04508

03	Density Person/sq. km	171
04	Sex ratio no. of F/1000M	960
05	Literacy ratio:	67.15%
	Male	77.21%
	Female	56.72%
06	Population Main workers	551972
07	Population Marginal workers	166241
08	Population of Agri Labour	256739
09	Population of Cultivators	217056
10	Population of SC	4,42,773
11	Population of ST	39,314
12	Number of Hoblies	20
13	Number of Grampanchayats	213
14	No. of Villages	693
15	No. of Towns	7
16	Average Rain fall	602.6 mm
17	Forest Land	1977
18	Banks	123
	Commercial Bank Branches	79
	Grameen Bank Branches	44
19	Land not available for cultivation (in Hect.)	35847
20	Barren land	29059
21	Land Utilization (in Hect.)	1040545
	Fallow land	252952
	Area Sown	787593
22	Number of Farmers	302254
23	Roads (in Kms)	1722.04
	National High way	126.84
	State Highway	510.45
	Major district roads	1084.75
24	Number of Bank Branches	123

25	Number of Primary Health Centers	57
	Number of Community Health Centers	7
26	Number of Stree Shakti SHG's	2983
	Credit linked SHG's	1217
27	Major Crops (in Hect.)	
	Cereals & Minor Millets Total Pulses	309321 112737
	Total Oil seeds	323003
	Total Fruits	10431
	Total Vegetables	11235
28	Total Irrigated Land (in Hect.)	128590

4.3 Administrative Division

Under the British Raj, Vijayapura District was part of the Bombay Presidency. At the time of Indian independence, 1948, Vijayapura District became part of Bombay State. In 1956, when South India was reorganized to consolidate speakers of the Kannada language, Vijayapura District was transferred to the new state of Karnataka. In 1997, Bagalkot District was split off from Vijayapura Divisions.For the administrative purposes, Vijayapura district is divided into five sub-divisions and 11 blocks as follows:

Table – 4.2: Sub-Divisions and Blocks of Vijayapura District

Sl. No.	Sub-Divisions	Blocks
01	Vijayapura	Vijayapura Rural and Vijayapura Urban
02	Basavan-Bagewadi	Basavan Bagewadi
03	Muddebihal	Muddebihal
04	Indi	Indi
05	Sindgi	Sindgi
06	Nidugundi	Nidugundi
07	Talikote	Talikote
08	Bableshwar	Bableshwar
09	Tikota	Tikota
10	Chadchan	Chadchan
11	Devara Hipparagi	Devara Hipparagi
12	Kolhar	Kolhar

Vijayapura District is divided into twelve talukas and 199 panchayat villages.

- Vijayapura, with forty-six panchayat villages,
- Basavana Bagewadi, with thirty-eight panchayat villages,
- Sindagi, with forty panchayat villages,
- Indi, with forty-four panchayatvillages,and,
- Muddebihal, with thirty-one panchayat villages.
- Nidagundi, with forty two panchayat villages.
- Talikote, with eleven panchayat villages.
- Babaleshwar, with thirty twopanchayat villages.
- Tikota, with fifty eight panchayat villages.

- Chadchan, with forty two panchayat villages.
- Devara Hipparagi, with forty two panchayat villages.
- Kolhar, with twenty eight panchayat villages.

Cities and towns in Vijayapura District

- Vijayapura
- Basavana Bagevadi
- Indi
- Muddebihal
- Sindagi
- Nidagundi
- Talikote
- Babaleshwar
- Tikota
- Chadchan
- Devara Hipparagi
- Kolhar

4.4 Geography

Vijayapura District has an area of 10541 square kilometres. It is bounded on the east by Gulbarga District, on the southeast by Raichur District, on the south and southwest by Bagalkot District, and on the west by Belgaum District, and by the Maharashtra of Sangli on the northwest and Sholapur on the north, Sangli on the north-west (both of Maharashtra state). It consists 5.49% of Karnataka state area. It lies between 15 x 50 and 17 x 28 North Latitude and 74 x 54 and 76 x 28 East Longitude. The administrative headquarters and chief town is Vijayapura. Geographically, the district lies in the tract of the Deccan

Plateaus. The lands of the district can be broadly divided into three zones: the northern belt consisting of the northern parts of Vijayapura Taluks of Indi and Sindagi; the central belt consisting of Vijayapura city; the southern belt consisting of the rich alluvial plains of the Krishna Rivers parted from the central belt by a stretch of barren Trap. The northern belt is a succession of low rolling uplands without much vegetation, gently rounded and falling into intermediate narrow valleys. The upland soil being shallow, the villagers are generally confined to the banks of the streams and are far away from one another. The Don River Valley has plains and consists of rich tracks of deep black soils stretching from west to east in the central part of the district. Across the Krishna River is a rich plain crossed from west to east by two lines of sandstone hills. Further south towards Badami and southwest to east by two lines of sandstone hills.

No doubt, there are irrigation potentials in the district. It has five rivers- Krishna, Bheema, Malprabha, Ghataprabha and Doni. The distancetraversed by these rivers in the districts is as under

1. Krishna about 200 kms.
2. Bheema about 120 kms.
3. Malaprabha about 105 kms.
4. Ghataprabha about 130 kms, and
5. Doni about 200 kms.

Inspite of these rivers, the district is facing an acute scarcity of water and frequent droughts, due to lack of optimum utilisation of existing water resources.

There are 34 rain gauge stations in Vijayapura District. The average annual rainfallfor the district is 553 mm with 37.2 rainy days. The monsoon generally breaks in the

district during June and lasts till October. The highest mean monthly rainfall is 149 mm in the month of September and lowest is 3 mm in February. The annual rainfall variation in the district is marginal from place to place. The soils of Vijayapura District can be categorized as a low to moderately yielding area (1000 to 8000 L/h) 72.2% of district falling in this category. From considerable part of the district (9%) poor yielding (less than 1000 L/h sources) or non–feasible areas have been reported. The talukas having largest poor yielding area, are Muddebihal (19%) followed by Indi (15%), Vijayapura and sindagi (13% each), BasavanBagewadi (4%). Low yielding areas (1000 to 4000 L/h source) in the district constitute about 40% of the district, with the largest being BasavanBagewadi (54%) and smallest in Indi taluka Moderate yields (4000 to 8000 L/h source) are reported from 36% of the district, highest being in Vijayapura with 70% of the area, and lowest being in Sindagi with 19% of the taluka. High yielding areas (more than 8000 L/h sources) over 15% of the district. The smallest area under this category are in SindagiTaluka (2% each) and largest is in Muddebihal (29% each) where very lengthy contact zones occur between traps and other formations On the basis of projections from this information, the main parameters affecting water quality in Vijayapura can be expected to be brackishness (salinity) and hardness (PH). Salinity affects the district in high to low groundwater problem areas and occurs in areas all along the major and minor river courses and stream courses.

4.5 Demographic Characteristics

Global human population growth is around 81 million annually or 1.2%. The global population has grown from 1 billion in 1800 to 7 billion in 2012. It is expected to keep on growing and may to reach 11 billion by the end of the century. The population growth rate is the rate at which the number of individuals increases or decreases in a given time period

as a fraction of the initial population. Specifically population growth rate refers to the change in population over a unite time period often expressed as a percentage of the number of individuals in the population at the beginning of that period. A positive growth ratio indicates the population is decreasing. Table 2.6 reveals the total population and growth rate of population in Vijayapura district.

The Vijayapura district ranks fourth in area, and tenth in population in Karnataka state. Table 2.1 deals with population characteristics. Its population is 21, 75,102 as per the census of 2011. Out of this 11, 12,953 are men and 10, 62,149 are women. It represents 3.43% of the total population of Karnataka state. Among five Taluka of the district, the Vijayapura Taluka has maximum population and the Muddebihal Taluka has minimum population. The following table shows the population of Vijayapura district.

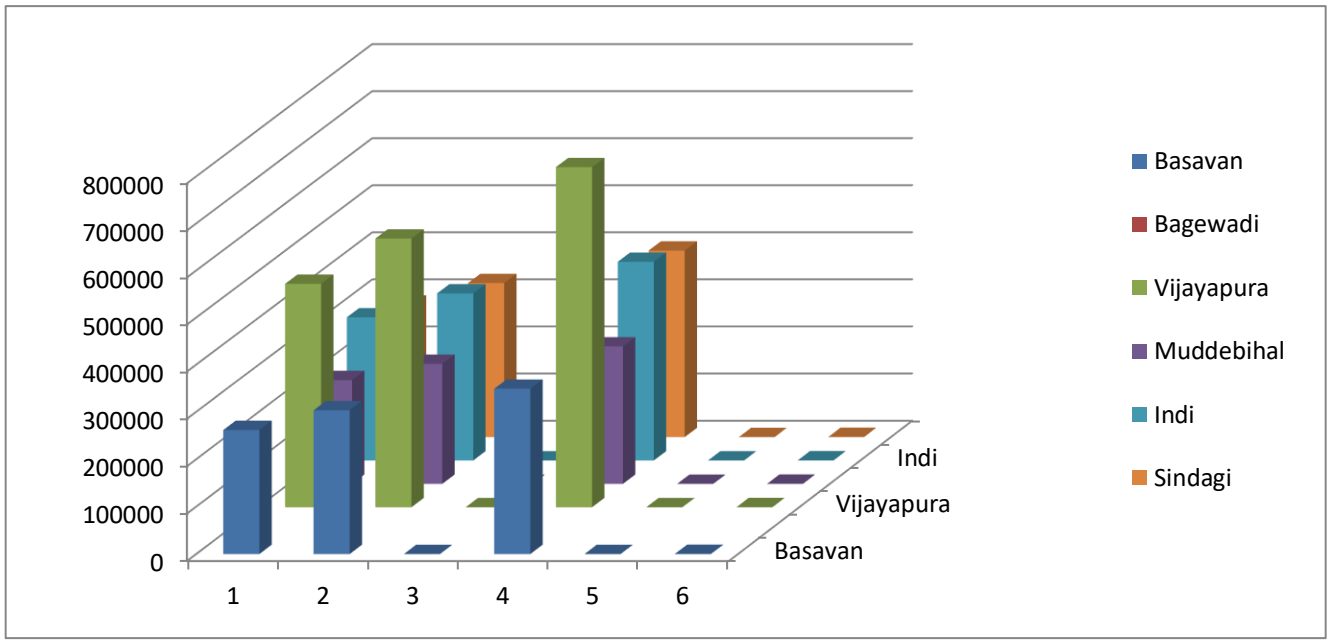
Table – 4.3 : Vijayapura: Sub-Division and Population

Sl. No.	Sub-Division	Name of Taluka	Growth Rate (%)	Pop^n (2011)	Growth Rate (%)	Density (2011)
01	VIJAYPURA	Basavan Bagewadi	15.88	348721	14.97	176
		Vijayapura	20.35	721075	24.89	270
		Muddebihal	15.69	290691	14.60	189
02	IN	Indi	16.77	421169	18.97	193

	D I	Sindagi	16.28	395675	21.13	182
Total			17.48	2175102	20.49	207

Source: Karnataka Census 2011

Graph – 4.1 : Vijayapura: Sub-Division and Population



According to 2011 Census the taluka wise distribution of population is as follows, B. Bagewadi has 348721, Vijayapura has 721075, Indi has 421169, Muddebihal has 290691 and Sindagi has 395675. The density of the population in the district is 207 and the density in various taluka is as follows. B. Bagewadi is having 176, Vijayapura has 271, Indi has 189, Muddebihal has 194 and Sindagi has 182. According to 2011 census the population of Vijayapura district is 2177331 persons.

4.6 Agriculture

In Vijayapura district agriculture forms the important source of livelihood for the most of the people. The population of the district according to 2011 census is 18, 06,918 of which 7, 18,213 are workers and 10, 88,705 are non-workers. Of the former category, 5,

03,755 persons (2, 17,056 cultivators + 2, 86,669 agricultural labourers) are engaged in agriculture, forming 70.1 percent of the total working population. Due to the untimely and inadequate nature of rainfall, Bijapur district has frequently suffered from famines and droughts. Though the district is being drained by five rivers, the area under irrigation is very small compared to 104 geographical area and the net area sown with agricultural crops. The total area sown is 8, 42,586 hectares, out of which only 1, 98,614 (23.5%) hectares is irrigated.

4.7 Educational Profile

Vijayapura is emerging as a hub for professional education. Previously (i.e. before the 1980s) there were very few professional educational institutions. Along with the professional colleges there are many colleges which provide under-graduate and postgraduate degrees in the faculty of applied science, pure science, social-sciences and humanities. Engineering colleges are affiliated to Visvesvaraya Technological University viz, B.L.D.E.A's V.P. Dr. P.G. Halakatti College of Engineering and Technology and SECAB College of Engineering and Technology Al Ameen Medical college is affiliated to Rajiv Gandhi University of Health Sciences.[11] BLDEA's B.M.Patil Medical College,Hospital and Research Centre is a deemed university recognized by UGC. Other professional colleges run by BLDE Association are BLDEA's college of pharmacy and college of Nursing sciences affiliated to RGUHS. Many of colleges except professional are affiliated to Rani Chennamma UniversityBelagaviviz, B.L.D.E.A'S A.S.Patil College of Commerce (Autonomous) MBA Programme; Rani Chennamma University has a Post-Graduation Centre at Vijayapura also.

First women's university in the state of Karnataka is located at Vijayapura. Various post-graduate courses like MBA, MCA are conducted here. Additionally Vijayapura is the first boasts of the Sainik School in the whole state, second in kodagu. This is a residential school preparing cadets for the Defence forces. And there many private computer training institutes providing good computer education like NIIT,Aptech, and ISCT etc. The Vijayapura district is known for its mosques, structural monuments, art and architectural heritages, archaeological sites and cave temples. With the objective to spread education in this area, Karnataka University opened its Post-Graduate Centre in 1993.

Karnataka State Women's University: Karnataka State Akkamahadevi Women's University, established in 2003 in the city of Vijayapura is the only Women's University in Karnataka dedicated exclusively for women's education. It is recognized under 2(f) and 12(B) of the UGC Act. Seventy women's colleges spread in twelve districts of North-Karnataka are affiliated to this University. The University offers various UG programmes leading to Bachelor's degree in Arts, Business Administration, Computer Applications, Commerce, Education, Fashion Technology, Home Science, Physical Education, Science and Social Work. It also offers 20 P G Courses, P G Diploma and Certificate Courses in the Faculties of Arts, Commerce and Management, Social Sciences, Science and Technology and Education.

IGNOU Bijapur Regional Center: Bijapur has IGNOU regional center, There are 7 districts under its jurisdiction (Districts Bagalkote, Bijapur, Bidar, Gulbarga,
Koppal Raichur and Yadgir).The newly created Bijapur Regional Centre would cater to seven northern districts.

- Vijayapura IGNOU Regional Center

Literature: The contribution of Vijayapura district to the field of literature is precious. From Chalukyasto the Adil Shahis, there was a great encouragement and patronage to literary scholars.

The following list shows some of the celebrated men of letters with their works from Vijayapura district:

- Ranna - Ajeetanath Purana, Gadhayuddha
- Nagachandra - Mallinath Purana, Ramachandra Charit Purana
- Basaveshwar - VachanSahitya
- Narahari - Torave Ramayana
- KeruruVasudevacharya - Vasantsena
- Dr. R.D. Ranade - Pathway to God in Kannada Literature
- Dr. P.G. Halakatti - Veerashiva Literature
- Hardekar Manjappa wrote about 50 books in Kannada

The pioneers of "Modern Kannada Literature" of Bijapur district are- Simpi Linganna, Madhurchanna, P.Dhola and Kapse Revappa. These four people formulated a group viz. "Geleyara Balaga" and worked for the promotion of Kannada Literature. Today's famous Kannda literary figures of Bijapur district are Veerendra Simpi, Krishna Kolhar Kulkarni, G.H. Hannerdu Math, Ramjan Darga, Aravind Malagatti and many more Vijayapur City Environment Description.

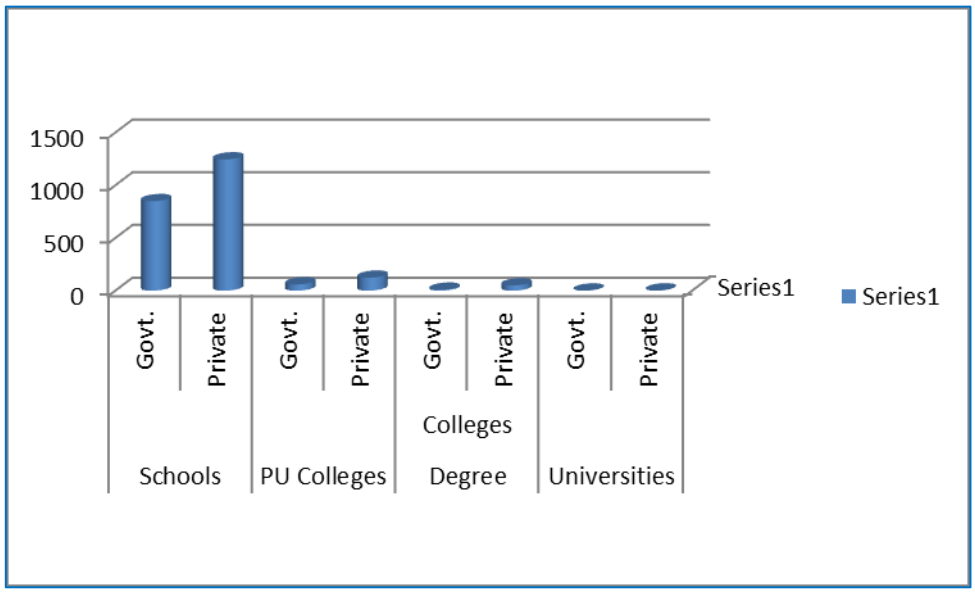
Educational Information:

Table – 4.4 : Educational Information

Sl.	District	Schools	PU Colleges	Degree	Universities

No.						Colleges			
01	Vijayapura	Govt.	Private	Govt.	Private	Govt.	Private	Govt.	Private
		849	1245	59	123	09	50	01	02

Graph – 4.2 : Vijayapura: Educational Information



Literacy: Literacy is nothing but eradicating poverty and mental isolation, for cultivating peaceful and friendly international relations, for permitting the free play of demographic process. At the macro social level educationhas been used as an indicator of socio economic development in structural explanationof the demographic transition. The education is one of the three aspect of humandevelopment the other being health and economic condition. According to census ofIndia, "A person who can both read and write with understanding in any language isto be taken as literate."

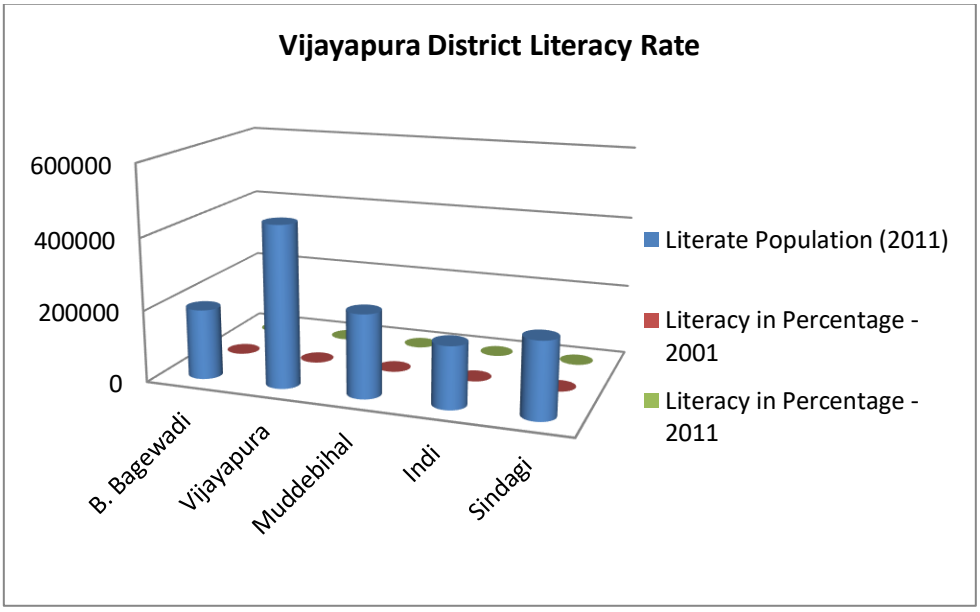
Table No: 4.5 : Vijayapura: Population of Literate and Literacy Rate

Sl. No.		Literate Population (2011)	Literacy in Percentage (2011)

01	B. Bagewadi	193547	64.91
02	Vijayapura	443063	71.55
03	Muddebihal	170665	68.51
04	Indi	229112	64.05
05	Sindagi	211881	63.30
Total		**1248268**	**67.15**

Source: Karnataka Census 2011

Graph – 4.3 : Vijayapura: Population of Literate and Literacy Rate



4.8 Climate and Temperature

Vijayapura has a semi-arid climate.It is located at 16.83°N 75.7°E. It has an average elevation of 606 metres (1988 ft). The climate of Vijayapura district is generally dry and healthy. In summer, especially in April and May it is too hot; at that time the temperature lays between 40 degree Celsius to 42 degree Celsius. In winter season, from November to January the temperature is between 15 degree Celsius to 20 degree Celsius. Usually the district has dry weather, so the humidity varies from 10% to 30% Rainfall. The district has 34 rain gauge stations. The average annual rainfall for the whole district is 552.8 mm, with 37.2 rainy days. The monsoon generally reaches the district by June and lasts till October. Though the total rainfall is not high, the district benefits both from the southwest and the north-east monsoons. The annual rainfall varies from place to place within the district.

4.9 Conclusion

The Vijayapura district and it's environ area is historical as well as religious potential tourist destination. Vijayapura district forms part of the Northern Karnataka. Geographically the whole district lays in one region namely the dry and arid tract of the Deccan plateau. The climatic condition of Vijayapura district is common with the adjoining district in the Deccan which is generally dry and healthy. The Vijayapura district ranks fourth, in area and tenth in population in Karnataka state. The establishment of the large scale and medium scale industries are not adequate in Vijayapuradistrict. Due to the historical importance of tourist destination hotel industry run in very large quantity. Bijapur district is well connected with road and railway. On the cross of rivers there are inlandwater transports to some of the places. The study region covers all twelve taluka. The Vijayapura district ranks fourth in area and tenth in population. Among twelve taluka of the district the

Vijayapura taluka has maximum population and the Muddebihal has minimum population. In the study region sex ratio is 948 per thousand male population in 2001 and it is increased in 2011 i.e. ratio is 954. It is less than the state of Karnataka i.e. 973 female per thousand male, but it is good indicator because the sex ratio is higher than India's sex ratio (940). The literacy rate of the district is 67.12 percent. It is less than that of Karnataka (75.6%) state and also India's (74.04%) so in education sector Bijapur is considered to be the backward district.However, results related to the adolescent girls-Reproductive Health, Healthy Eating Habits, Effect of Family and society on development of Adolescent Girls, Guidance and Counselling interpretation was done in the future chapter.

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CHAPTER – V

ANALYSIS AND INTERPRETATION

4.1 Introduction

Scores related to reproductive health, and healthy eating habits of adolescent girls, their family and social environment, and need for guidance and counselling in reproductive health and healthy eating habits of 300 adolescents in Bijapur district which constituted the raw data for the present study. The data were subjected to statistical treatment in pursuance of the objectives of the study and research hypotheses. The analysis of data is presented in four sections in this chapter.

- **Section – 1** deals with the analysis and interpretation of the personal (demographic) and socio-economic data characteristics such as age, locality, religion, family structure, parent's qualification, occupation, and family income.
- **Section – 2** deals with the simple correlation in between the variables reproductive health and healthy eating habits and their components – knowledge, practice and attitude ;
- **Section – 3** deals with the comparison of reproductive health and healthy eating habits and their components – knowledge, practice and attitude on demographic variable which are location, religion, type of family and SES ;

- **Section – 4** deals with the relative contributions of components, such as, knowledge, practice and attitude of reproductive health as well as healthy eating habits; and
- **Section – 5** deals with the interaction effects of components like knowledge, practice and attitude on reproductive health as well as healthy eating habits.

5.1 Section I: Personal (Demographical) and Socio-Economic data

Demographic data is used to provide accurate and timely information of personal background of the concerned population. The demographic data demonstrates the participants appropriateness for the study (Marshall, 1996). The demographic data contextualizes the findings and the formulation of appropriate recommendations. It enables more individuals to gain knowledge, practice, and attitude towards reproductive health and healthy eating habits. It is also helpful for adolescent girls to get effective support and information from significant people.

This section deals with the analysis and interpretation of the demographic characteristics such as age, locality, religion, family structure, parent's qualification and occupation, and family income. This information assessed that, it has a significant impact on gaining knowledge, practice and attitude of reproductive health and knowledge, practice and attitude about healthy eating habits.

Table No- 5.1The Personal details of adolescent girls

Personal details		Frequency	Percentage
Age	17 Years	53	17.66
	18 Years	247	82.33

	Total	**300**	**100**
Locality	Rural	158	52.67
	Urban	142	47.33
	Total	**300**	**100**
Religion	Hindu	181	60.33
	Muslim	114	38
	Christian	05	1.66
	Total	**300**	**100**

The Personal data consist of characteristics which were divided into different categories like age, locality, religion, parent's qualification and occupation, family income. The eligible respondents were selected from rural and urban areas of government pre-university (IInd year class) college - going adolescent girls belong to the age group of 17-18 years.

Age: Table no. 3, shows with regard to the age wise distribution of adolescent girls. The overall age of respondents varied between 17-18 years. For the purpose of generating more specific data on the age of the respondents. The more number of participants were selected of the age of 18 years i.e., 247 participants (82.33%), and 17 years of participants were 53 (17.66%). This age group of 17-18 years is very crucial age for adolescent girls. This age is called to be a process of becoming an adult or it is the age of maturity. Therefore adolescent age is very important and crucial among all others stages of human development.

Locality (Region): The total sample size consisting of 300 adolescent girls among whom 158 (52.67%) were from rural and 142 (47.33%) of the samples were from urban areas.

Religion: Religion plays an important role in the development of life an individual, Religion also can play an important role in promoting positive health which is connected to

spirituality and morality. Among the selected respondents, a majority of them were Hindu 181 (60.33%), Muslim participants were 114 (38%), and Christians respondents were 05 (1.66%). Religious views have a greater impact on individual where many of the religious practices are opposing sexual and reproductive health and they consider it as single. In this regard religion also can play a significant role in the opinion of adolescent girls towards reproductive health and healthy eating habits.

5.2 Socio-Economic data:

Table No.5.2 The family details of Adolescent Girls.

Family details		Frequency	Percentage
Types of Family	Nuclear	197	65.66
	Joint	103	34.33
	Total	**300**	**100**
Income of the Family	Below 30,000	181	60.33
	30,001 to 1,00,000	85	28.33
	1,00,001 to 2,00,000	27	9.00
	2,00,001 and above	07	2.33
	Total	**300**	**100**

Family is the primary social group of the individual to adjust with and to form socially accepted behaviour and to lead a smooth social life. To understand adolescent girls, it is important to understand the families they come from;

Type of Family: Table no.4, shows information and distribution of families with regard to type of families, majority of respondents belong to nuclear families i.e.,197 (65.66%), and 103 (34.33%) of girls belong to joint families. The quality of family relationships is a crucial determinant of the competence and confidence with which adolescent girls face the major transition from childhood to adulthood that we call adolescence (Noller, 1995).

Therefore, it is not a matter of type of family system, but it is the way in which family relationships exists, the type of environment created and nature of nurturing children and young people which have a great impact in acquiring positive reproductive health and healthy eating habits.

Income of the Family: Annual income is an important indicator to assess the family's economic status. Family income has an impact on the health and nutritional status of the households, especially on adolescent girls. The present study indicates family income where a majority of the adolescent girls numbering 188 (62.66%) girls had a family income of below 30,000. This is followed by 85 (28.33%) had family income of 30,001 to 1,00,000, and only 27 (9.0%) of respondents had family income of 1,00,00 to 2,00,000. This shows that a majority of adolescent girls were from poor family background. Family income is also an important variable that reflects socio-economic status of the respondents. The affordability of adolescent girls' health services is dependent on the status of income of the family.

Table no.5.3 Educational qualification and Occupational details of Parents

Education of Parents	Father	Mother
Illiterate	46 (15.33%)	65 (21.67%)
Primary Education	48 (16%)	90 (30%)
Secondary Education	57 (19%)	70(23.33%)
PUC	65 (21.67%)	29 (9.67%)
UG Education	55 (18.33%)	24 (8.0%)
PG Education	29 (9.67)	22 (7.33%)
Total	**300 (100%)**	**300 (100%)**

Education is the instrument for human development and level of education of parents is the most important factor affecting overall development of their children. Onoch (1985) concludes that a child from a well educated family with high socio-economic status is more likely to perform better than a child from an uneducated family .Educated family provides lot of support such as a decent and good environment for academic work, parental support, guidance, academic materials and decent feeding. She is likely to be sent to good schools where good teachers handle her subjects.

The level of education of the parents of adolescent girls may affect their health in general, malnutrition, and reproductive health. The educational status of the parents of the adolescent girls was assessed on the basis of their academic qualification which was classified into different categories as shown in the table no. 5.3.

The study reveals that the highest number of 65 (21.67%) of the adolescent girl's fathers completed education up to PUC and 70 (23.33%) of respondents stated that their mothers were able to completed only secondary education. 55 (18.33%) girls stated that their fathers completed UG education. Parent's education helps them to enhance skills in educating and communicating with young girls. This is true among well educated parents. 48 (16%) of the adolescent girls stated that their fathers completed primary education and 90 (30%) of mothers completed primary education. Only 29 (9.67%) of girls mothers could able to complete PUC education. 29 (9.67%) of girls stated that their fathers and 22 (7.33%) mothers were able to complete their higher studies of PG education. The study further reveals that 46 (15.33%) of fathers of the adolescent girls and 65 (21.67%) of mothers were illiterates.

Education definitely brings an impact on adolescent girls to get the right information from their parents. Parental education is an important index of socio-economic

status and significant unique predictor of children's educational and behavioural outcomes. It is essential that parents need to be a part of the growth and development of their daughter where parents can clarify and provide friendly atmosphere to enhance their knowledge and prepare them to be better adults.

Table no. 5.4 Occupational details of Parents

Occupation of Parents	Father	Mother
Employee	42 (14%)	34 (11.33%)
Business	64 (21.33%)	25 (8.33%)
Unorganized labours	82 (27.33%)	72 (24%)
Agriculture	112 (37.33%)	87 (29%)
House Wife	0	82 (27.33%)
Total	**300 (100%)**	**300 (100%)**

Social status of a person in society is based on the occupation that he/she holds and it is a matter of prestige where they are recognized with others. In today's scenario, occupation for some people is based on attainment on the level of education and skills and everyone tries to access more than others to have better education. Various economic resources and different level of power to influence a community's institution. Therefore,

differences in the ability to control resources and participate in society's rewards produce equal opportunities, (Robert, 1986).

Table no.5.4 shows the respondent's parents categories of occupation where the major occupation among the selected adolescent girls' parents was agriculture, father 112 (37.33%) and mothers 87 (29%) were farmers. The next major occupation of parents was unorganized labourers were fathers 82 (27.33%) and mothers were 72 (24%) comes under this category of occupation, in this category both parents working as daily wages workers, mechanical workers, auto drivers, carpenters, maid workers and tailoring workers. The next major occupation of parents where fathers 42 (14%) and mothers 34 (11.33%) were employees in the categories such as working as bus drivers, teachers, clerks, office peons with regard to fathers and the mothers were working as teachers, clerks, D- group workers. Other major highlights of the study among parents 64 (21.33%) of father and 25 (8.33%) of mothers were working as self business like management of small hotels, fruit shops, garment shops, general stores these were main small occupations of the respondents parents. Other major highlight of the study is, among mothers, 82 (27.33%) of them were house wives.

Parents need to be equipped with resources and skills which help them to bring up their daughters and furnish with better care, love, and emotional support which help them feel good and bring success and happiness to their parents and the entire family. The individual's capacity to succeed in college depends on how successfully she is being managed by her parent in the environment. It is an environment where the girl learns skills, and attitude which could mold them into productive and successful human being. The socio-economic status plays a significant role in providing resources and skills to live a socialized way of life for adolescent girls (vellymalay, 2012

SECTION – 2

5.2 Correlation Analysis

5.2.1 Relationship between Reproductive Health and its Components – Knowledge, Practice, Attitude

Knowledge can be gained through experience or education. Education about reproductive health should be an integral part of the learning process. Lack of knowledge about reproductive health among adolescent girls mainly affects their practices on reproductive health, health status, fertility, and also affects the health of the next generation. Therefore, adolescent girls require accurate information about reproductive health. It covers a wide range of issues, like pregnancy, menstrual health diseases, and reproductive tract infection prevention. Knowledge of reproductive health can promote practice and maintain the attitude on reproductive health, and also contribute to reduction of unwanted pregnancies, reduction in the incidence of STDs, RTIs, and reduced maternal and infant mortality rates. Hence, the present study attempted to assess the significant relationship between knowledge regarding reproductive health of adolescent girls and their practice.

In order to investigate the interrelationships among the components of reproductive health like knowledge, practice and attitude, the product – moment coefficients of correlation were computed. In order to test the significance of the obtained 'r', the appropriate 't' test was used. The t- value calculation for correlation coefficient, this calculation will explain the t- value and degrees of freedom associated with a Pearson Correlation Coefficient which give the correlation value.

Table no. 5.5 Correlation between Knowledge and Practice of Reproductive Health among Adolescent Girls

Variable	Correlation Coefficient-**Knowledge**			
	'r'	't'	p-value	Significance
Practice	0.6752	15.8024	< 0.05	Yes

*Significant at p= < 0.05
**Correlation Statistic is significant at the <0.05

Interpretation

The obtained 't' value 15.8024 is greater than the tabled 't' value 1.96 at 0.05 level. Therefore, it is concluded that there is a positive and significant relationship between knowledge and practice with respect to variables under consideration. It implies that the obtained correlation is significant. Thus, the hypothesis that there is a positive relationship between the knowledge and practice of reproductive health among adolescent girls is accepted. Henceforth , H_o is accepted.

Findings

From the above analysis, it is revealed that there is a positive relationship between knowledge regarding reproductive health of adolescent girls and their practice.

Table – 5.6 Correlation between Knowledge and Attitude of Reproductive Health among Adolescent Girls

Variable	Correlation Coefficients-**Knowledge**			
	'r'	't'	p-value	Significance

Attitude	0.7572	20.0134	< 0.05	Yes

*Significant at p= < 0.05
**Correlation Statistic is significant at the <0.05

Interpretation

The obtained 't' value 20.0134 is greater than the tabled 't' value 1.96 at 0.05 level. It is, therefore, concluded that there is a positive and significant relationship between two components in respect of the variables under consideration. It implies that the obtained correlation is significant. Thus, the hypothesis that there is a positive and significant relationship between the knowledge and attitude of reproductive health among adolescent girls is accepted.

Findings

From the above analysis, it is revealed that there is a significant relationship between knowledge regarding reproductive health of adolescent girls and their attitude.

Table – 5.7: Correlation between Practice and Attitude of Reproductive Health among Adolescent Girls

Variable	Correlation Coefficients-**Practice**			
	'r'	't'	p-value	Significance
Attitude	0.7361	18.7706	< 0.05	Yes

*Significant at p= < 0.05
**Correlation Statistic is significant at the <0.05

Interpretation

The obtained 't' value 18.7706 is greater than the tabled 't' value 1.96 at 0.05 level. It is, therefore, concluded that there is a positive and significant relationship between two components in respect of the variables under consideration. It implies that the obtained

correlation is significant. Thus, the hypothesis that there is a positive and significant relationship between the practice and attitude of reproductive health among adolescent girls is accepted. Henceforth, Ho is accepted and H1 is rejected.

Findings

From the above analysis, it is revealed that there is a significant relationship between practice regarding reproductive health of adolescent girls and their attitude.

Table – 5.8: Correlation between Family and Social Environment of Adolescent Girls and their Reproductive Health

Variable	Correlation Coefficients – **Family & Social Environment**			
	'r'	't'	p-value	Significance
Reproductive Health	0.3396	6.2338	< 0.05	Yes

*Significant at p= < 0.05
**Correlation Statistic is significant at the <0.05

Interpretation

The obtained 't' value 6.2338 is greater than the tabled 't' value 1.96 at 0.05 level. It is, therefore, concluded that there is a positive and significant relationship between two scores in respect of the variables under consideration. It implies that the obtained correlation is significant. Thus, the hypothesis that there is a positive and significant relationship between the family and social environment of adolescent girls and their reproductive health is accepted.

Findings

From the above analysis, it is revealed that there is a significant relationship between the family and social environment of adolescent girls and their reproductive health.

Table –5.9: Correlation between Guidance and Counselling of Adolescent Girls and their Reproductive Health

Variable	Correlation Coefficients – **Guidance and Counselling**			
	'r'	't'	p-value	Significance
Reproductive Health	0.3293	6.0213	< 0.05	Yes

*Significant at p= < 0.05
**Correlation Statistic is significant at the <0.05

Interpretation

The obtained 't' value 6.0213 is greater than the tabled 't' value 1.96 at 0.05 level. It is, therefore, concluded that there is a positive and significant relationship between two scores in respect of the variables under consideration. It implies that the obtained correlation is significant. Thus, the hypothesis that there is a positive and significant relationship between the guidance and counselling of adolescent girls and their reproductive health is accepted.

Findings

From the above analysis, it is revealed that there is a significant relationship between the guidance and counselling of adolescent girls and their reproductive health.

5.2.2. Relationship between Healthy Eating Habits and its Components – Knowledge, Practice, Attitude

In order to investigate the interrelationship among the components of healthy eating habits like knowledge, practice and attitude, the product – moment coefficients of correlation were computed. In order to test the significance of obtained 'r', the appropriate 't' test was used.

Table –5.10: Correlation between Knowledge and Practice of Healthy Eating Habits among Adolescent Girls

Variable	Correlation Coefficients-**Knowledge**			
	'r'	't'	p-value	Significance
Practice	0.8177	24.5240	< 0.05	Yes

*Significant at p= < 0.05
**Correlation Statistic is significant at the <0.05

Interpretation

The obtained 't' value 24.5240 is greater than the tabled 't' value 1.96 at 0.05 level. It is, therefore, concluded that there is a positive and significant relationship between two components in respect of the variables under consideration. It implies that the obtained correlation is significant. Thus, the hypothesis that there is a positive and significant relationship between the knowledge as well as practice of healthy eating habits among adolescent girls is accepted.

Findings

From the above analysis, it is revealed that there is a significant relationship between knowledge regarding healthy eating habits of adolescent girls and their practice.

Table –5.11: Correlation between Knowledge and AttitudeScores of Healthy Eating Habits among Adolescent Girls

Variable	Correlation Coefficients-**Knowledge**			
	'r'	't'	p-value	Significance
Attitude	0.7723	20.9868	< 0.05	Yes

*Significant at p= < 0.05
**Correlation Statistic is significant at the <0.05

Interpretation

The obtained 't' value 20.9868 is greater than the tabled 't' value 1.96 at 0.05 level. It is, therefore, concluded that there is a positive and significant relationship between two components in respect of the variables under consideration. It implies that the obtained correlation is significant. Thus, the hypothesis that there is a positive and significant relationship between the knowledge as well as attitude of healthy eating habits among adolescent girls is accepted. Henceforth, Ho is accepted and H1 is rejected.

Findings

From the above analysis, it is revealed that there is a significant relationship between knowledge regarding healthy eating habits of adolescent girls and their attitude.

Table –5.12: Correlation between Practice and Attitude Scores of Healthy Eating Habits among Adolescent Girls

Variable	Correlation Coefficients-**Practice**			
	'r'	't'	p-value	Significance
Attitude	0.7911	22.3232	< 0.05	Yes

*Significant at p= < 0.05
**Correlation Statistic is significant at the <0.05

Interpretation

The obtained 't' value 22.3232 is greater than the tabled 't' value 1.96 at 0.05 level. It is, therefore, concluded that there is a positive and significant relationship between two components regard to variables under consideration. It implies that the obtained correlation is significant. Thus, the hypothesis that there is a positive and significant relationship between the practice as well as attitude of healthy eating habits among adolescent girls is accepted. Henceforth, Ho is accepted and H1 is rejected.

Findings

From the above analysis, it is revealed that there is a significant relationship between practice regarding healthy eating habits of adolescent girls and their attitude.

Table –5.13: Correlation between Family and Social Environment of Adolescent Girls and their Healthy Eating Habits

Variable	Correlation Coefficients – **Family & Social Environment**			
	'r'	't'	p-value	Significance
Healthy Eating Habits	0.2505	4.4667	< 0.05	Yes

*Significant at p= < 0.05
**Correlation Statistic is significant at the <0.05

Interpretation

The obtained 't' value 4.4667 is greater than the tabled 't' value 1.96 at 0.05 level. It is, therefore, concluded that there is a positive and significant relationship between two scores in respect of the variables under consideration. It implies that the obtained correlation is significant. Thus, the hypothesis that there is a positive and significant

relationship between the family and social environment of adolescent girls and their healthy eating habits is accepted. Henceforth, Ho is accepted and H1 is rejected.

Findings

From the above analysis, it is revealed that there is a significant relationship between the family and social environment of adolescent girls and their healthy eating habits.

Table –5.14: Correlation between Guidance and Counselling of Adolescent Girls and their Healthy Eating Habits

Variable	Correlation Coefficients – **Guidance and Counselling**			
	'r'	't'	p-value	Significance
Healthy Eating Habits	0.3606	6.6750	< 0.05	Yes

*Significant at p= < 0.05
**Correlation Statistic is significant at the <0.05

Interpretation

The obtained 't' value 6.6750 is greater than the tabled 't' value 1.96 at 0.05 level. It is, therefore, concluded that there is a positive and significant relationship between two scores in respect of the variables under consideration. It implies that the obtained correlation is significant. Thus, the hypothesis that there is a positive and significant relationship between the guidance and counselling of adolescent girls and their healthy eating habits is accepted. Henceforth, Ho is accepted and H1is rejected.

Findings

From the above analysis, it is revealed that there is a positive relationship between the guidance and counselling of adolescent girls and their healthy eating habits.

SECTION – 3

5.3 Differential Analysis

5.3.1.Differencein Reproductive Health and its Components – Knowledge, Practice, Attitude of Adolescent Girls on their Demographic Variables

The demographic variables of adolescent girls, such as location, religion, type of family, SES (Socio-Economic Status) and their scores on reproductive health constituted the raw data for the study. In pursuance of the objectives of the study, the data were subjected to statistical treatment using 't' test. The analysis of the obtained values and their interpretation is as follows :

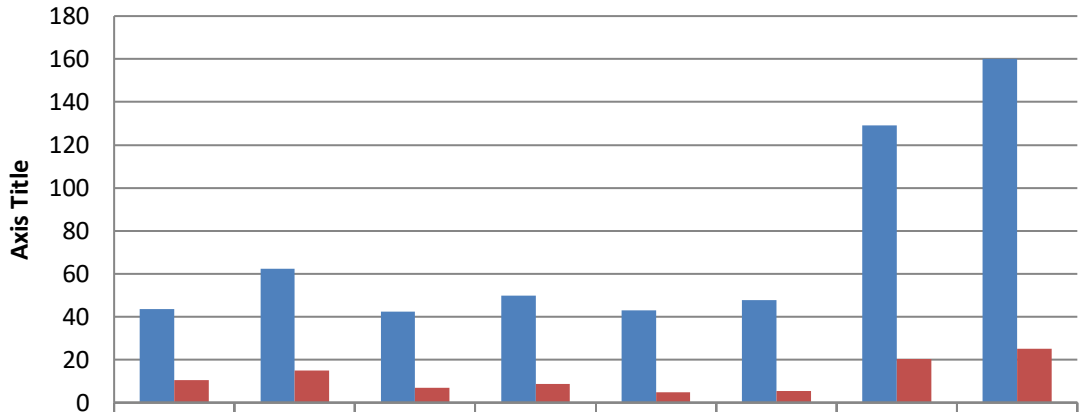
Comparison of Reproductive Health of Adolescent Girls among Rural and Urban Areas

Table – 5.15: Comparison of Adolescent Girls – Rural and Urban with respect to their Reproductive Health

Variable	Gender	Mean	SD	SE	t-value	P-value	Sign.
Knowledge	Rural	129.18	20.25	1.64	11.7651	< 0.05	Yes
	Urban	159.99	24.95	2.06			
Practice	Rural	43.59	10.40	0.84	12.8097	< 0.05	Yes
	Urban	62.48	14.83	1.22			
Attitude	Rural	42.46	7.04	0.57	7.9702	< 0.05	Yes
	Urban	49.69	8.62	0.71			
Reproductive Health	Rural	43.12	4.79	0.39	7.9227	< 0.05	Yes
	Urban	47.82	5.47	0.45			

*Significant at p= < 0.05
**'t' test Statistic is significant at the <0.05

Figure - 5.1 : Comparison of Adolescent Girls – Rural and Urban with respect to their Reproductive Health



	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
	Knowledge		Practice		Attitude		Reproductive health	
Mean	43.59	62.48	42.46	49.69	43.12	47.82	129.18	159.99
SD	10.4	14.83	7.04	8.62	4.79	5.47	20.25	24.95

Interpretation

Knowledge –Rural / Urban

The obtained 't' value 11.7651 with respect to knowledge regarding reproductive health of rural and girls is greater than the tabled 't' urban adolescent value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – rural and urban – differ significantly in respect of the variable under consideration. Thus, the hypothesis that rural and urban adolescent girls differ significantly in respect of their knowledge regarding reproductive health is accepted. Further, it is noticed that mean value scores of knowledge regarding reproductive health of urban adolescent girls is greater than rural adolescent girls. Hence, it

is concluded that the adolescent girls belonging to urban area are having more knowledge regarding reproductive health when compared to adolescent girls in rural area.

Practice –Rural / Urban

The obtained 't' value 12.8097 with respect to practice regarding reproductive health of rural and urban adolescent girls is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – rural and urban – differ significantly in respect of the variable under consideration. Thus, the hypothesis that rural and urban adolescent girls differ significantly in respect of their practice regarding reproductive health is accepted. Further, it is noticed that mean value scores of practice regarding reproductive health of urban adolescent girls is greater than that of rural adolescent girls. Hence, it is concluded that the adolescent girls belonging to urban area are having more practice regarding reproductive health when compared to adolescent girls in rural area.

Attitude –Rural / Urban

The obtained 't' value 7.9702 with respect to attitude regarding reproductive health of rural and urban adolescent girls is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – rural and urban – differ significantly in respect of the variable under consideration. Thus, the hypothesis that rural and urban adolescent girls differ significantly in respect of their attitude regarding reproductive health is accepted. Further, it is noticed that mean value scores of attitude regarding reproductive health of urban adolescent girls is greater than that of rural adolescent girls. Hence, it is concluded that the adolescent girls belonging to urban area are having favourable attitude regarding reproductive health when compared to adolescent girls in rural area.

Reproductive Health –Rural / Urban

The obtained 't' value 7.9227 with respect to total awareness regarding reproductive health of rural and urban adolescent girls is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – rural and urban – differ significantly in respect of the variable under consideration. Thus, the hypothesis that rural and urban adolescent girls differ significantly in respect of their total awareness regarding reproductive health is accepted. Further, it is noticed that mean value scores of total awareness regarding reproductive health of urban adolescent girls is greater than that of rural adolescent girls. Hence, it is concluded that the adolescent girls belonging to urban area are having more total awareness regarding reproductive health when compared to adolescent girls in rural area.

Findings

The analysis and interpretation of data reveals the following findings:

- Adolescent girls belonging to rural and urban areas differ in their knowledge regarding their reproductive health.
- Adolescent girls belonging to rural and urban areas differ in their practice regarding their reproductive health.
- Adolescent girls belonging to rural and urban areas differ in their attitude regarding their reproductive health.
- Adolescent girls belonging to rural and urban areas differ in their total awareness regarding reproductive health.

Comparison of Reproductive Health of Adolescent Girls among Hindu and Non-Hindu Religion

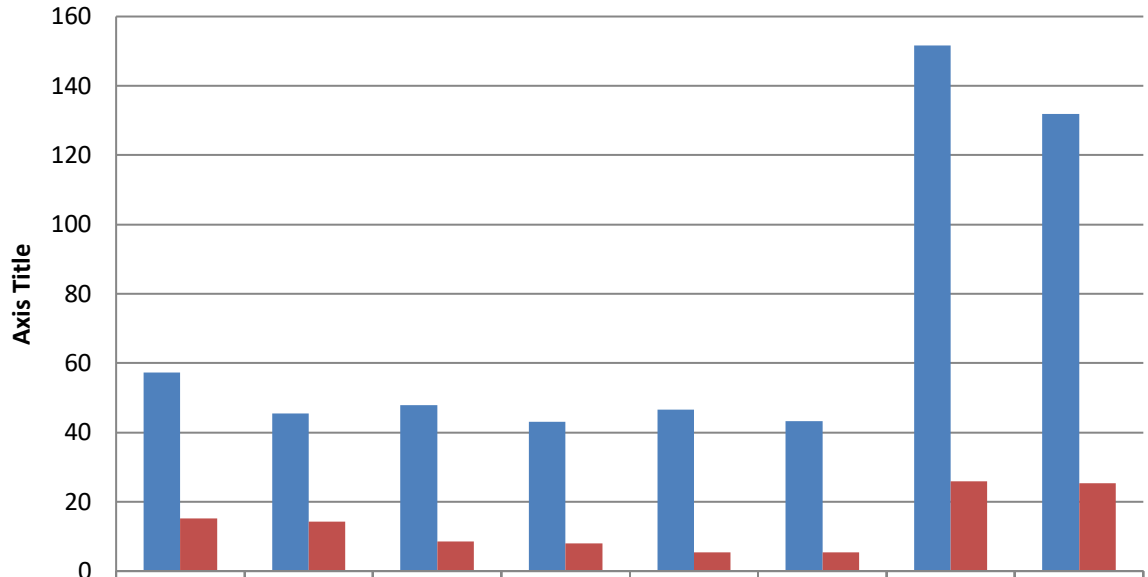
Table – 5.16 : Comparison of Adolescent Girls – Hindu and Non-Hindu with respect to their Reproductive Health

Variable	Religion	Mean	SD	SE	t-value	P-value	Sign.
Knowledge	Hindu	57.22	15.19	1.11	6.6186	< 0.05	Yes
	Non-Hindu	45.50	14.23	1.34			
Practice	Hindu	47.80	8.48	0.62	4.8398	< 0.05	Yes
	Non-Hindu	42.99	8.07	0.76			
Attitude	Hindu	46.66	5.47	0.40	5.1606	< 0.05	Yes
	Non-Hindu	43.33	5.32	0.50			
Reproductive Health	Hindu	151.69	25.94	1.89	6.4799	< 0.05	Yes
	Non-Hindu	131.82	25.26	2.39			

*Significant at p= < 0.05

**'t' test Statistic is significant at the <0.05

Figure - 5.2 : Comparison of Adolescent Girls – Hindu and Non-Hindu with respect to their Reproductive Health



	Knowledge		Practice		Attitude		Reproductive Health	
	Hindu	Non-Hindu	Hindu	Non-Hindu	Hindu	Non-Hindu	Hindu	Non-Hindu
Mean	57.22	45.5	47.8	42.99	46.66	43.33	151.69	131.82
SD	15.19	14.23	8.48	8.07	5.47	5.32	25.94	25.26

Interpretation

Knowledge – Hindu / Non-Hindu

The obtained 't' value 6.6186 with respect to the knowledge regarding reproductive health of Hindu and non-Hindu adolescent girls is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – Hindu and non-Hindu – differ significantly in respect of the variable under consideration. Thus, the hypothesis that Hindu and non-Hindu adolescent girls differ significantly in respect of their knowledge regarding reproductive health is accepted. Further, it is noticed that mean value scores of knowledge regarding reproductive health of Hindu adolescent girls is greater than that of non-Hindu adolescent girls. Hence, it is concluded that the adolescent girls belonging to Hindu

religion are having more knowledge regarding reproductive health when compared to adolescent girls in non-Hindu religion.

Practice– Hindu / Non-Hindu

The obtained 't' value 4.8398 with respect to practice regarding reproductive health of Hindu and non-Hindu adolescent girls is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – Hindu and non-Hindu – differ significantly in respect of the variable under consideration. Thus, the hypothesis that Hindu and non-Hindu adolescent girls differ significantly in respect of their practice regarding reproductive health is accepted. Further, it is noticed that mean value scores of practice regarding reproductive health of Hindu adolescent girls is greater than that of non-Hindu adolescent girls. Hence, it is concluded that the adolescent girls belonging to Hindu religion are having more practice regarding reproductive health when compared to adolescent girls in non-Hindu religion.

Attitude – Hindu / Non-Hindu

The obtained 't' value 5.1606 with respect to attitude regarding reproductive health of Hindu and non-Hindu adolescent girls is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – Hindu and non-Hindu – differ significantly in respect of the variable under consideration. Thus, the hypothesis that Hindu and non-Hindu adolescent girls differ significantly in respect of their attitude regarding reproductive health is accepted. Further, it is noticed that mean value scores of attitude regarding reproductive health of Hindu adolescent girls is greater than that of non-Hindu adolescent girls. Hence, it is concluded that the adolescent girls belonging to Hindu

religion are having positive attitude regarding reproductive health when compared to adolescent girls in non-Hindu religion.

Reproductive Health – Hindu / Non-Hindu

The obtained 't' value 7.9227 with respect to total awareness regarding reproductive health of Hindu and non-Hindu adolescent girls is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – Hindu and non-Hindu – differ significantly in respect of the variable under consideration. Thus, the hypothesis that Hindu and non-Hindu adolescent girls differ significantly in respect of their total awareness regarding reproductive health is accepted. Further, it is noticed that mean value scores of total awareness regarding reproductive health of Hindu adolescent girls is greater than that of non-Hindu adolescent girls. Hence, it is concluded that the adolescent girls belonging to Hindu religion are having more total awareness regarding reproductive health when compared to adolescent girls in non-Hindu.

Findings

The analysis and interpretation of data reveals the following findings:

- Adolescent girls belonging to Hindu and non-Hindu religion differ in their knowledge regarding their reproductive health.
- Adolescent girls belonging to Hindu and non-Hindu religion differ in their practice regarding their reproductive health.
- Adolescent girls belonging to Hindu and non-Hindu religion differ in their attitude regarding their reproductive health.
- Adolescent girls belonging to Hindu and non-Hindu religion differ in their total awareness regarding reproductive health.

Comparison of Reproductive Health of Adolescent Girls among Nuclear and Joint Families

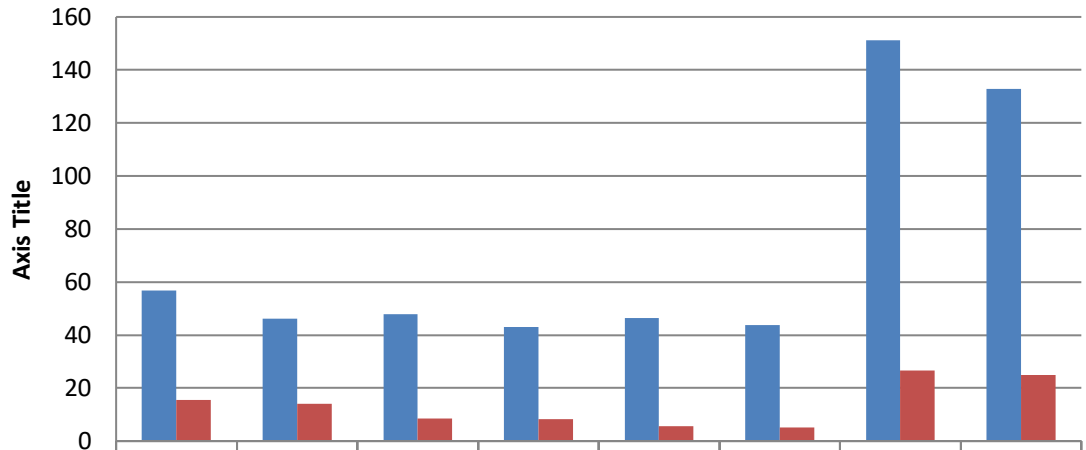
Table – 5.17: Comparison of Adolescent Girls – Nuclear and Joint Family Background with respect to their Reproductive Health

Variable	Type of Family	Mean	SD	SE	t-value	P-value	Sign.
Knowledge	Nuclear	56.89	15.61	1.14	5.9977	< 0.05	Yes
	Joint	46.16	13.96	1.31			
Practice	Nuclear	47.77	8.46	0.62	4.7076	< 0.05	Yes
	Joint	43.09	8.16	0.77			
Attitude	Nuclear	46.45	5.64	0.41	4.1987	< 0.05	Yes
	Joint	43.71	5.22	0.49			
Reproductive Health	Nuclear	151.11	26.60	1.94	5.8651	< 0.05	Yes
	Joint	132.96	24.93	2.34			

*Significant at p= < 0.05

**'t' test Statistic is significant at the <0.05

Figure - 5.3 : Comparison of Adolescent Girls – Nuclear and Joint Family Background with respect to their Reproductive Health



	Knowledge		Practice		Attitude		Reproductive Health	
	Nuclear	Joint	Nuclear	Joint	Nuclear	Joint	Nuclear	Joint
Mean	56.89	46.16	47.77	43.09	46.45	43.71	151.11	132.96
SD	15.61	13.96	8.46	8.16	5.64	5.22	26.6	24.93

Knowledge – Nuclear / Joint Family

The obtained 't' value 5.9977 with respect to knowledge regarding reproductive health of nuclear and joint family background adolescent girls is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups differ significantly in respect of the variable under consideration. That is, the hypothesis that nuclear and joint family background adolescent girls differ significantly in respect of their knowledge regarding reproductive health is accepted. Further, it is noticed that mean scores of knowledge regarding reproductive health of adolescent girls belong to nuclear family background is greater than that of adolescent girls belong to joint family background. Hence, it is concluded that the adolescent girls belonging to nuclear family are having more knowledge regarding reproductive health when compared to adolescent girls in joint family.

Practice – Nuclear / Joint Family

The obtained 't' value 4.7076 with respect to practice regarding reproductive health of nuclear and joint family background adolescent girls is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups differ significantly in respect of the variable under consideration. That is, the hypothesis that nuclear and joint family background adolescent girls differ significantly in respect of their practice regarding reproductive health is accepted. Further, it is noticed that mean scores of practice regarding reproductive health of nuclear family background adolescent girls is greater than that of joint family background adolescent girls. Hence, it is concluded that the adolescent girls belonging to nuclear family are having more knowledge regarding reproductive health when compared to adolescent girls in joint family.

Attitude – Nuclear / Joint Family

The obtained 't' value 4.1987 with respect to attitude regarding reproductive health of adolescent girls belong to nuclear and joint family background is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups differ significantly in respect of the variable under consideration. That is, the hypothesis that adolescent girls belong to nuclear and joint family background differ significantly in respect of their attitude regarding reproductive health is accepted. Further, it is noticed that mean scores of attitude regarding reproductive health of adolescent girls from nuclear family background is greater than that of dolescent girls from joint family background. Hence, it is concluded that the adolescent girls belonging to nuclear family are having positive attitude regarding reproductive health when compared to adolescent girls in joint family.

Reproductive Health – Nuclear / Joint Family

The obtained‘t’ value 7.9227 with respect to total awareness regarding reproductive health of adolescent girls from nuclear and joint family background is greater than the tabled ‘t’ value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – nuclear and joint family – differ significantly in respect of the variable under consideration. Thus, the hypothesis that adolescent girls belong to nuclear and joint family background differ significantly in respect of their total awareness regarding reproductive health is accepted. Further, it is noticed that mean value of total awareness regarding reproductive health scores of adolescent girls from nuclear family is greater than that of adolescent girls from joint family. Hence, it is concluded that the adolescent girls belonging to nuclear family are having more total awareness regarding reproductive health when compared to adolescent girls in joint family.

Findings

The analysis and interpretation of data reveals the following findings:

- Adolescent girls belonging to nuclear and joint family background differ in their knowledge regarding their reproductive health.
- Adolescent girls belonging to nuclear and joint family background differ in their practice regarding their reproductive health.
- Adolescent girls belonging to nuclear and joint family background differ in their attitude regarding their reproductive health.
- Adolescent girls belonging to nuclear and joint family background differ in their total awareness regarding reproductive health.

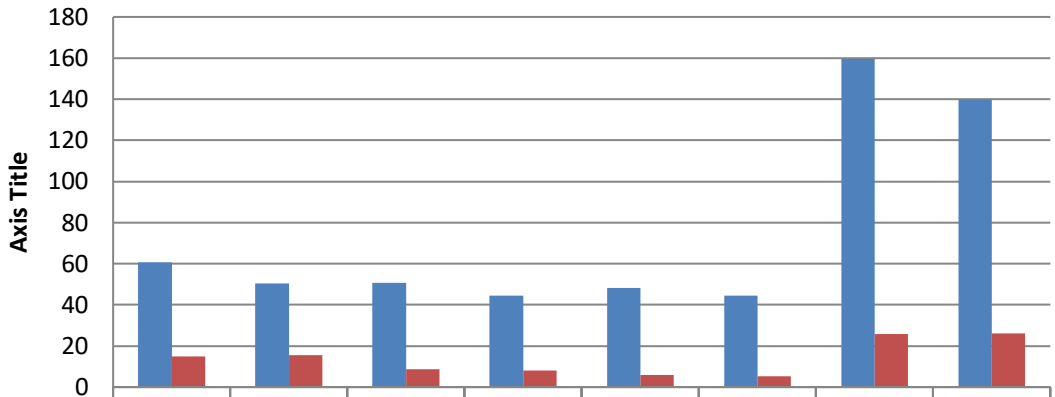
Comparison of Reproductive Health of Adolescent Girls among High and Low Socio-Economic Status Groups

Table – 5.18: Comparison of Adolescent Girls – High and Low Socio-Economic Status Background with respect to their Reproductive Health

Variable	SES	Mean	SD	SE	t-value	P-value	Signi.
Knowledge	High	60.78	14.98	1.80	4.9148	< 0.05	Yes
	Low	50.48	15.37	1.01			
Practice	High	50.77	8.61	1.04	5.4651	< 0.05	Yes
	Low	44.58	8.14	0.54			
Attitude	High	48.23	5.78	0.70	4.8970	< 0.05	Yes
	Low	44.58	5.33	0.35			
Reproductive Health	High	159.78	25.77	3.10	5.6276	< 0.05	Yes
	Low	139.64	26.18	1.72			

*Significant at p= < 0.05
**'t' test Statistic is significant at the <1.97

Figure - 5.4 : Comparison of Adolescent Girls – High and Low SES Background with respect to their Reproductive Health



	Knowledge		Practice		Attitude		Reproductive Health	
Mean	60.78	50.48	50.77	44.58	48.23	44.58	159.78	139.64
SD	14.98	15.37	8.61	8.14	5.78	5.33	25.77	26.18

Knowledge – High / Low SES

The obtained 't' value 4.9148 with respect to knowledge regarding reproductive health of adolescent girls from high and low SES is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups differ significantly in respect of the variable under consideration. That is, the hypothesis that adolescent girls from high and low SES differ significantly in respect of their knowledge regarding reproductive health is accepted. Further, it is noticed that mean of scores of knowledge regarding reproductive health of adolescent girls from high SES is greater than that of adolescent girls from low SES. Hence, it is concluded that the adolescent girls belonging to high SES are having more knowledge regarding reproductive health when compared to low SES adolescent girls.

Practice – High / Low SES

The obtained 't' value 5.4651 with respect to practice regarding reproductive health of adolescent girls from high and low SES is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups differ significantly in respect of the variable under consideration. That is, the hypothesis that adolescent girls from high and low SES differ significantly in respect of their practice regarding reproductive health is accepted. Further, it is noticed that mean scores of practice regarding reproductive health of adolescent girls belong to high SES is greater than that of adolescent girls belong to low SES. Hence, it is concluded that the adolescent girls belonging to high SES are having more practice regarding reproductive health when compared to low SES adolescent girls.

Attitude – High / Low SES

The obtained 't' value 4.8970 with respect to attitude regarding reproductive health of adolescent girls with high and low SES is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups differ significantly in respect of the variable under consideration. That is, the hypothesis that adolescent girls from high and low SES differ significantly in respect of their attitude regarding reproductive health is accepted. Further, it is noticed that mean scores of attitude regarding reproductive health of adolescent girls with high SES is greater than that of adolescent girls from low SES. Hence, it is concluded that the adolescent girls belonging to high SES are having positive attitude regarding reproductive health when compared to low SES adolescent girls.

Reproductive Health – High / Low SES

The obtained 't' value 5.6276 with respect to total awareness regarding reproductive health of adolescent girls with high and low SES is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – high and low SES – differ

significantly in respect of the variable under consideration. Thus, the hypothesis that high and low SES adolescent girls differ significantly in respect of their total awareness regarding reproductive health is accepted. Further, it is noticed that mean value of total awareness regarding reproductive health scores of adolescent girls with high SES is greater than that of adolescent girls with low SES. Hence, it is concluded that the adolescent girls belonging to high SES are having more total awareness regarding reproductive health when compared to adolescent girls belonging to low SES.

Findings

The analysis and interpretation of data reveals the following findings:

- Adolescent girls belonging to high and low SES background differ in their knowledge regarding their reproductive health.
- Adolescent girls belonging to high and low SES background differ in their practice regarding their reproductive health.
- Adolescent girls belonging to high and low SES background differ in their attitude regarding their reproductive health.
- Adolescent girls belonging to high and low SES background differ in their total awareness regarding reproductive health.

5.3.2 DifferenceinHealthy Eating Habits and its Components – Knowledge, Practice, Attitude of Adolescent Girls on their Demographic Variables

The demographic variables of adolescent girls, such as location, religion, type of family, SES and their scores on healthy eating habits constituted the raw data for the study. In pursuance of the objectives of the study, the data were subjected to statistical treatment using‘t’ test. The analysis of the obtained values and their interpretation is as follows :

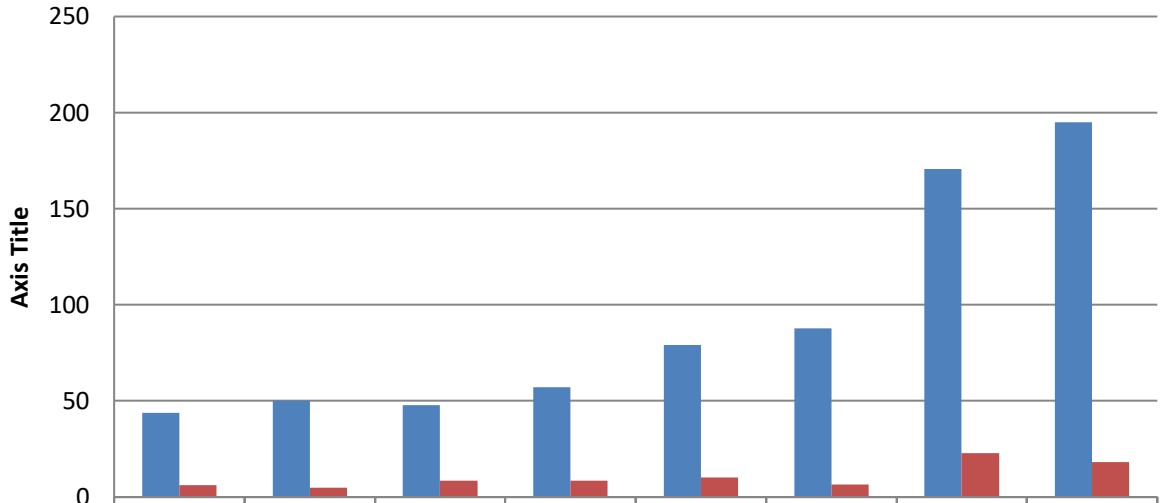
Comparison of Healthy Eating Habits of Adolescent Girls among Rural and Urban Areas

Table – 5.19: Comparison of Adolescent Girls – Rural and Urban with respect to their Healthy Eating Habits

Variable	Gender	Mean	SD	SE	t-value	P-value	Sign.
Knowledge	Rural	43.93	6.16	0.50	9.6643	< 0.05	Yes
	Urban	50.15	4.89	0.40			
Practice	Rural	47.76	8.51	0.69	9.4730	< 0.05	Yes
	Urban	57.10	8.55	0.70			
Attitude	Rural	78.97	10.28	0.83	8.9333	< 0.05	Yes
	Urban	87.84	6.37	0.53			
Healthy Eating Habits	Rural	170.67	22.78	1.84	10.2546	< 0.05	Yes
	Urban	195.08	18.09	1.49			

*Significant at p= < 0.05
**'t' test Statistic is significant at the <0.05

Figure - 5.5 : Comparison of Adolescent Girls – Rural and Urban with respect to their Healthy Eating Habits



	Knowledge		Practice		Attitude		Healthy Eating Habits	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Mean	43.93	50.15	47.76	57.1	78.97	87.84	170.67	195.08
SD	6.16	4.89	8.51	8.55	10.28	6.37	22.78	18.09

Interpretation

Knowledge –Rural / Urban

The obtained 't' value 9.6643with respect to knowledge regarding healthy eating habits of adolescent girls from rural and urban areas is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – rural and urban – differ significantly in respect of the variable under consideration. Thus, the hypothesis that adolescent girls from rural and urban areas differ significantly in respect of their knowledge regarding healthy eating habits is accepted. Further, it is noticed that mean value scores of knowledge regarding healthy eating habits of adolescent girls from urban is greater than that of adolescent girls from rural. Hence, it is concluded that the adolescent girls belonging

to urban area are having more knowledge regarding healthy eating habits when compared to adolescent girls in rural area.

Practice –Rural / Urban

The obtained 't' value 9.4730 with respect to practice regarding healthy eating habits of adolescent girls from rural and urban is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – rural and urban – differ significantly in respect of the variable under consideration. Thus, the hypothesis that adolescent girls from rural and urban differ significantly in respect of their practice regarding healthy eating habits is accepted. Further, it is noticed that mean value scores of practice regarding healthy eating habits of adolescent girls from urban is greater than that of adolescent girls from rural. Hence, it is concluded that the adolescent girls belonging to urban area are having more practice regarding healthy eating habits when compared to adolescent girls in rural area.

Attitude –Rural / Urban

The obtained 't' value 8.9333 with respect to attitude regarding healthy eating habits of adolescent girls from rural and urban is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – rural and urban – differ significantly in respect of the variable under consideration. Thus, the hypothesis that adolescent girls from rural and urban differ significantly in respect of their attitude regarding healthy eating habits is accepted. Further, it is noticed that mean value scores of attitude regarding healthy eating habits of adolescent girls from urban is greater than that of adolescent girls from rural. Hence, it is concluded that the adolescent girls belonging to

urban area are having positive attitude regarding healthy eating habits when compared to adolescent girls in rural area.

Reproductive Health – High / Low SES

The obtained 't' value 10.2546 with respect to total awareness healthy eating habits of adolescent girls from rural and urban areas is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – rural and urban – differ significantly in respect of the variable under consideration. Thus, the hypothesis that adolescent girls from rural and urban differ significantly in respect of their total awareness regarding healthy eating habits is accepted. Further, it is noticed that mean value of total awareness regarding healthy eating habits scores of adolescent girls from urban is greater than that of adolescent girls from rural. Hence, it is concluded that the adolescent girls belonging to urban area are having more total awareness regarding healthy eating habits when compared to adolescent girls belonging to rural area.

Findings

The analysis and interpretation of data reveals the following findings:

- Adolescent girls belonging to rural and urban area differ in their knowledge regarding their healthy eating habits.
- Adolescent girls belonging to rural and urban area differ in their practice regarding their healthy eating habits.
- Adolescent girls belonging to rural and urban area differ in their attitude regarding their healthy eating habits.
- Adolescent girls belonging to rural and urban area differ in their total awareness regarding healthy eating habits.

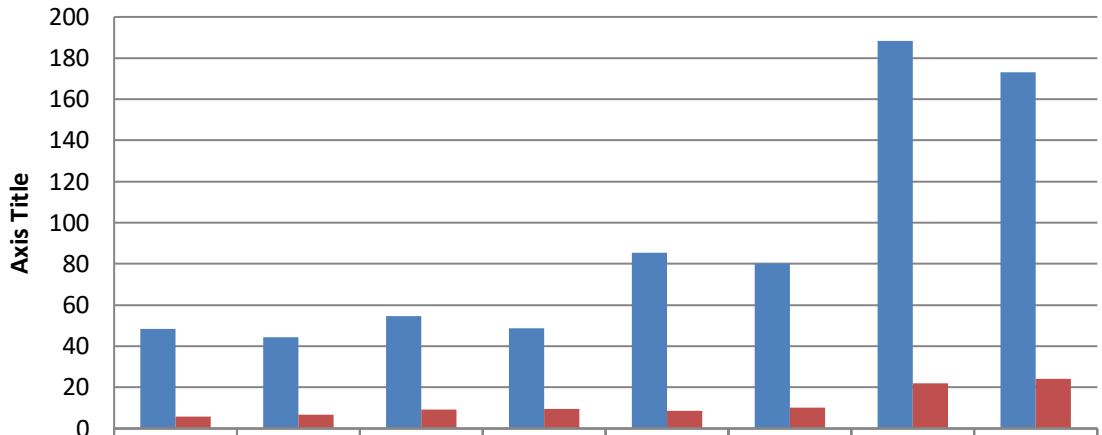
Comparison of Healthy Eating Habits of Adolescent Girls among Hindu and Non-Hindu Religions

Table – 5.20: Comparison of Adolescent Girls – Hindu and Non-Hindu with respect to their Healthy Eating Habits

Variable	Religion	Mean	SD	SE	t-value	P-value	Sign.
Knowledge	Hindu	48.48	5.69	0.41	5.5417	< 0.05	Yes
	Non-Hindu	44.46	6.70	0.63			
Practice	Hindu	54.57	9.19	0.67	5.3955	< 0.05	Yes
	Non-Hindu	48.59	9.45	0.89			
Attitude	Hindu	85.26	8.75	0.64	4.6724	< 0.05	Yes
	Non-Hindu	80.05	10.26	0.97			
Healthy Eating Habits	Hindu	188.31	21.98	1.60	5.5857	< 0.05	Yes
	Non-Hindu	173.10	24.16	2.28			

*Significant at p= < 0.05
**'t' test Statistic is significant at the <0.05

Figure - 5.6 : Comparison of Adolescent Girls – Hindu and Non-Hindu Religion with respect to their Healthy Eating Habits



	Hindu	Non-Hindu	Hindu	Non-Hindu	Hindu	Non-Hindu	Hindu	Non-Hindu
	Knowledge		Practice		Attitude		Healthy Eating Habits	
Mean	48.48	44.46	54.57	48.59	85.26	80.05	188.31	173.1
SD	5.69	6.7	9.19	9.45	8.75	10.26	21.98	24.16

Interpretation

Knowledge – Hindu / Non-Hindu

The obtained 't' value 5.5417 with respect to knowledge regarding healthy eating habits of adolescent girls belong to Hindu and non-Hindu is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – Hindu and non-Hindu – differ significantly in respect of the variable under consideration. Thus, the hypothesis that adolescent girls belong to Hindu and non-Hindu differ significantly in respect of their knowledge regarding healthy eating habits is accepted. Further, it is noticed that mean value scores of knowledge regarding healthy eating habits of adolescent girls belong to Hindu and non-Hindu is greater than that of adolescent girls belong to non-Hindu. Hence, it is concluded that the adolescent girls belonging to Hindu religion are having more

knowledge regarding healthy eating habits when compared to adolescent girls in non-Hindu religion.

Practice– Hindu / Non-Hindu

The obtained 't' value 5.3955 with respect to practice regarding healthy eating habits of Hindu and non-Hindu adolescent girls is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – Hindu and non-Hindu – differ significantly in respect of the variable under consideration. Thus, the hypothesis that Hindu and non-Hindu adolescent girls differ significantly in respect of their practice regarding healthy eating habits is accepted. Further, it is noticed that mean value scores of practice regarding healthy eating habits of adolescent girls belong to Hindu is greater than that of adolescent girls belong to non-Hindu. Hence, it is concluded that the adolescent girls belonging to Hindu religion are having more practice regarding healthy eating habits when compared to adolescent girls in non-Hindu religion.

Attitude – Hindu / Non-Hindu

The obtained 't' value 4.6724 with respect to attitude regarding healthy eating habits of adolescent girls belong to Hindu and non-Hindu is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – Hindu and non-Hindu – differ significantly in respect of the variable under consideration. Thus, the hypothesis that adolescent girls belong to Hindu and non-Hindu differ significantly in respect of their attitude regarding healthy eating habits is accepted. Further, it is noticed that mean value scores of attitude regarding healthy eating habits of adolescent girls belong to Hindu and non-Hindu is greater than that of adolescent girls belong to Hindu and non-Hindu. Hence, it is concluded that the adolescent girls belonging to Hindu religion are having positive

attitude regarding healthy eating habits when compared to adolescent girls in non-Hindu religion.

Healthy Eating Habits – Hindu / Non-Hindu

The obtained 't' value 5.5857 with respect to total awareness regarding healthy eating habits of Hindu and non-Hindu adolescent girls is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – Hindu and non-Hindu – differ significantly in respect of the variable under consideration. Thus, the hypothesis that adolescent girls from Hindu and non-Hindu differ significantly in respect of their total awareness regarding healthy eating habits is accepted. Further, it is noticed that mean value of total awareness regarding healthy eating habits scores of adolescent girls from Hindu is greater than that of non-Hindu adolescent girls. Hence, it is concluded that the adolescent girls belonging to Hindu religion are having more total awareness regarding healthy eating habits when compared to adolescent girls in non-Hindu.

Findings

The analysis and interpretation of data reveals the following findings:

- Adolescent girls belonging to Hindu and non-Hindu religion differ in their knowledge regarding their healthy eating habits.
- Adolescent girls belonging to Hindu and non-Hindu religion differ in their practice regarding their healthy eating habits.
- Adolescent girls belonging to Hindu and non-Hindu religion differ in their attitude regarding their healthy eating habits.
- Adolescent girls belonging to Hindu and non-Hindu religion differ in their total awareness regarding healthy eating habits.

Comparison of Healthy Eating Habits of Adolescent Girls among Nuclear and Joint Families

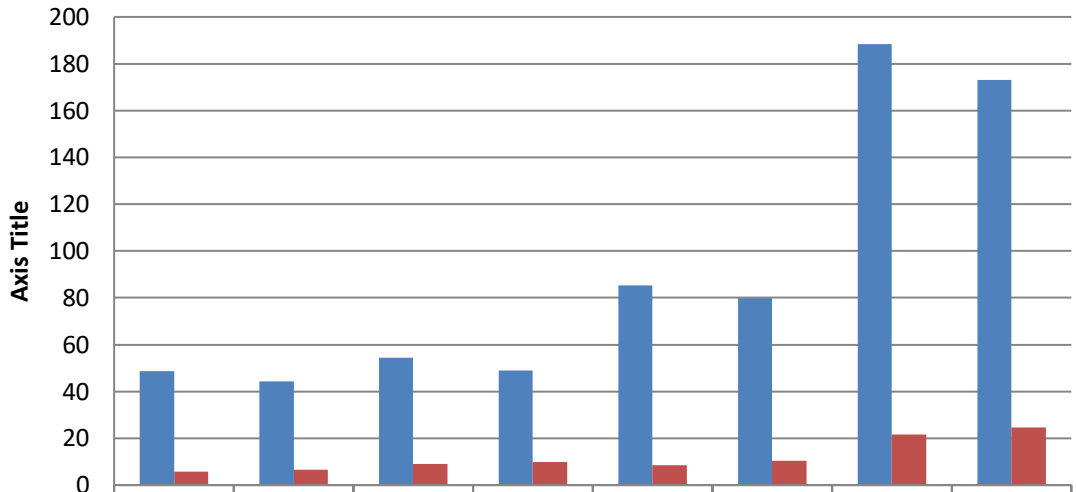
Table – 5.21: Comparison of Adolescent Girls – Nuclear and Joint Family Background with respect to their Healthy Eating Habits

Variable	Type of Family	Mean	SD	SE	t-value	P-value	Signi.
Knowledge	Nuclear	48.55	5.70	0.42	5.7693	< 0.05	Yes
	Joint	44.38	6.61	0.62			
Practice	Nuclear	54.47	9.06	0.66	5.0961	< 0.05	Yes
	Joint	48.81	9.76	0.92			
Attitude	Nuclear	85.43	8.50	0.62	5.0825	< 0.05	Yes
	Joint	79.81	10.44	0.98			
Reproductive Health	Nuclear	188.45	21.56	1.58	5.6941	< 0.05	Yes
	Joint	173.00	24.65	2.32			

*Significant at p= < 0.05

**'t' test Statistic is significant at the <0.05

Figure - 5.7 : Comparison of Adolescent Girls – Nuclear and Joint Families with respect to their Healthy Eating Habits



	Knowledge		Practice		Attitude		Reproductive Health	
	Nuclear	Joint	Nuclear	Joint	Nuclear	Joint	Nuclear	Joint
Mean	48.55	44.38	54.47	48.81	85.43	79.81	188.45	173
SD	5.7	6.61	9.06	9.76	8.5	10.44	21.56	24.65

Knowledge – Nuclear / Joint Family

The obtained 't' value 5.7693 with respect to knowledge regarding healthy eating habits of adolescent girls belong to nuclear and joint family background is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups differ significantly in respect of the variable under consideration. That is, the hypothesis that adolescent girls from nuclear and joint family background differ significantly in respect of their knowledge regarding healthy eating habits is accepted. Further, it is noticed that mean scores of knowledge regarding healthy eating habits of adolescent girls from nuclear family background is greater than that of adolescent girls joint family background. Hence, it is concluded that the adolescent girls belonging to nuclear family are having more knowledge regarding healthy eating habits when compared to adolescent girls in joint family.

Practice – Nuclear / Joint Family

The obtained 't' value 5.0961 with respect to practice regarding healthy eating habits of adolescent girls belong to nuclear and joint family background is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups differ significantly in respect of the variable under consideration. That is, the hypothesis that adolescent girls from nuclear and joint family background differ significantly in respect of their practice regarding healthy eating habits is accepted. Further, it is noticed that mean scores of practice regarding healthy eating habits of adolescent girls from nuclear family background is greater than that of adolescent girls from joint family background. Hence, it is concluded that the adolescent girls belonging to nuclear family are having more knowledge regarding healthy eating habits when compared to adolescent girls in joint family.

Attitude – Nuclear / Joint Family

The obtained't' value 5.0825 with respect to attitude regarding healthy eating habits of adolescent girls from nuclear and joint family background is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups differ significantly in respect of the variable under consideration. That is, the hypothesis that adolescent girls from nuclear and joint family background differ significantly in respect of their attitude regarding healthy eating habits is accepted. Further, it is noticed that mean scores of attitude regarding healthy eating habits of adolescent girls who belong to nuclear family background is greater than that of adolescent girls who belong to joint family background. Hence, it is concluded that the adolescent girls belonging to nuclear family are having

positive attitude regarding healthy eating habits when compared to adolescent girls in joint family.

Healthy Eating Habits – Nuclear / Joint Family

The obtained 't' value 5.6941 with respect to total awareness regarding healthy eating habits of adolescent girls from nuclear and joint family background is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups – nuclear and joint family – differ significantly in respect of the variable under consideration. Thus, the hypothesis that adolescent girls belong to nuclear and joint family background differ significantly in respect of their total awareness regarding healthy eating habits is accepted. Further, it is noticed that mean value of total awareness regarding healthy eating habits scores of adolescent girls in nuclear family is greater than that of adolescent girls in joint family. Hence, it is concluded that the adolescent girls belonging to nuclear family are having more total awareness regarding healthy eating habits when compared to adolescent girls in joint family.

Findings

The analysis and interpretation of data reveals the following findings:

- Adolescent girls belonging to nuclear and joint family background differ in their knowledge regarding their healthy eating habits.
- Adolescent girls belonging to nuclear and joint family background differ in their practice regarding their healthy eating habits.
- Adolescent girls belonging to nuclear and joint family background differ in their attitude regarding their healthy eating habits.

- Adolescent girls belonging to nuclear and joint family background differ in their total awareness regarding healthy eating habits.

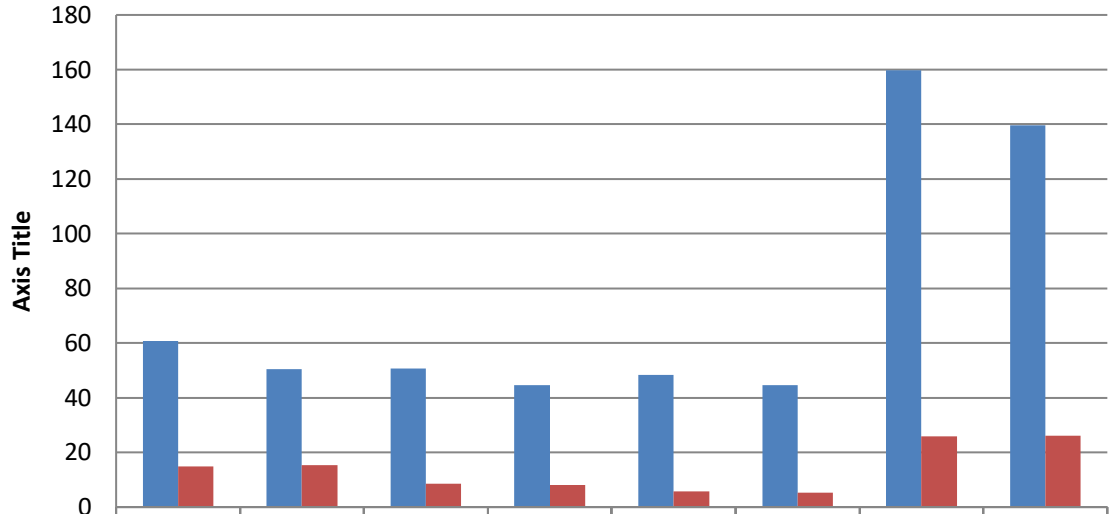
Comparison of Healthy Eating Habits of Adolescent Girls among High and Low SES Groups

Table – 5.22: Comparison of Adolescent Girls – High and Low SES Background with respect to their Healthy Eating Habits

Variable	SES	Mean	SD	SE	t-value	P-value	Sign.
Knowledge	High	50.10	5.54	0.67	4.8066	< 0.05	Yes
	Low	46.04	6.32	0.42			
Practice	High	55.99	9.55	1.15	3.6282	< 0.05	Yes
	Low	51.25	9.51	0.63			
Attitude	High	86.61	9.26	1.11	3.2795	< 0.05	Yes
	Low	82.33	9.57	0.63			
Reproductive Health	High	192.70	22.62	2.72	4.0835	< 0.05	Yes
	Low	179.62	23.54	1.55			

*Significant at p= < 0.05
**'t' test Statistic is significant at the <1.97

Figure - 5.8 : Comparison of Adolescent Girls – High and Low SES Groups with respect to their Healthy Eating Habits



	Knowledge		Practice		Attitude		Reproductive Health	
Mean	60.78	50.48	50.77	44.58	48.23	44.58	159.78	139.64
SD	14.98	15.37	8.61	8.14	5.78	5.33	25.77	26.18

Knowledge – High / Low SES

The obtained 't' value 4.8066with respect to knowledge regarding healthy eating habits of adolescent girls from high and low SES is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups differ significantly in respect of the variable under consideration. That is, the hypothesis that adolescent girls from high and low SES differ significantly in respect of their knowledge regarding healthy eating habits is accepted. Further, it is noticed that mean of scores of knowledge regarding healthy eating habits of adolescent girls from high SES is greater than that of adolescent girls from low SES. Hence, it is concluded that the adolescent girls belonging to high SES are having more knowledge regarding healthy eating habits when compared to low SES adolescent girls.

Practice – High / Low SES

The obtained 't' value 3.6282 with respect to practice regarding healthy eating habits of adolescent from girls high and low SES is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups differ significantly in respect of the variable under consideration. That is, the hypothesis that adolescent girls from high and low SES differ significantly in respect of their practice regarding healthy eating habits is accepted. Further, it is noticed that mean scores of practice regarding healthy eating habits of adolescent girls from high SES is greater than that of adolescent girls from low SES. Hence, it is concluded that the adolescent girls belonging to high SES are having more practice regarding healthy eating habits when compared to adolescent girls from low SES.

Attitude – High / Low SES

The obtained 't' value 3.2795 with respect to attitude regarding healthy eating habits of adolescent girls from high and low SES is greater than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups differ significantly in respect of the variable under consideration. That is, the hypothesis that adolescent girls from high and low SES differ significantly in respect of their attitude regarding healthy eating habits is accepted. Further, it is noticed that mean scores of attitude regarding healthy eating habits of adolescent girls from high SES is greater than that of adolescent girls from low SES. Hence, it is concluded that the adolescent girls belonging to high SES are having positive attitude regarding healthy eating habits when compared to adolescent girls from low SES.

Healthy Eating Habits – High / Low SES

The obtained 't' value 4.0835with respect to total awareness regarding healthy eating habits of adolescent girls from high and low SES is greater than the tabled 't' value

(1.97) at 0.05 level. It is, therefore, concluded that the two groups – high and low SES – differ significantly in respect of the variable under consideration. Thus, the hypothesis that adolescent girls from high and low SES differ significantly in respect of their total awareness regarding healthy eating habits is accepted. Further, it is noticed that mean value of total awareness regarding healthy eating habits scores of adolescent girls from high SES is greater than that of adolescent girls from low SES. Hence, it is concluded that the adolescent girls belonging to high SES are having more total awareness regarding healthy eating habits when compared to adolescent girls belonging to low SES.

Findings

The analysis and interpretation of data reveals the following findings:

- Adolescent girls belonging to high and low SES background differ in their knowledge regarding their healthy eating habits.
- Adolescent girls belonging to high and low SES background differ in their practice regarding their healthy eating habits.
- Adolescent girls belonging to high and low SES background differ in their attitude regarding their healthy eating habits.
- Adolescent girls belonging to high and low SES background differ in their total awareness regarding healthy eating habits.

Section – 4

5.4 Multiple Regression Analysis

The significant zero-order correlations between factors affecting the reproductive health of adolescent girls on one hand and knowledge, practice, and attitude on the other cannot be taken to be final and ultimate. This can be due to the zero-order correlation between any two variables being their common dependence upon a third variable or several other variables.

The most commonly used procedure in the prediction of a continuous criterion variable is the multiple linear regression model (Guilford, 1965). Weights known as regression coefficients are determined for each predictor variable. The resulting sum of squares on the composite of these variables will show the highest possible relationship (multiple correlation) with the criterion variable.

The commonly applied computational procedures for multiple linear regressions that have now been made feasible by electronic computers were used for the study. In this method, multiple correlation coefficients reveal the degree of relationship between a linear combination of predictor variables and the respective criterion variables. Further, partial regression coefficients reveal the extent to which the respective criterion variables contribute to the reproductive health variable.

The product of β value with the correlation coefficient of the respective criterion variable with the predictor variable reveals the extent to which the respective predictor variable contributes towards the determination of the variation in the criterion variable under the conditions of linearity. Often, this contribution is expressed in percentage with the square of the multiple correlation coefficients also being expressed in percentage.

In this method, multiple correlations and multiple linear regressions reveal the degree to which each independent variable is related to reproductive health (criterion). Partial regression coefficients reveal the individual predictor variable on the effect of components of reproductive health being controlled. To identify this type of relationship between three components on the one hand and the reproductive health on the other hand, multiple correlations and multiple regression analyses were carried out.

Prediction of Reproductive Health of Adolescent Girls – An Analysis

The regression coefficients obtained for the dependent variable reproductive health is shown in the following table:

Table – 5.23: Regression Coefficients and Multiple Correlation Coefficients of Reproductive Health(Y_1)

Variable	Reg. Coefficient	SE of Reg. Coefi.	t-value	p-level	Significance
Knowledge (X_1)	0.8740	0.0289	30.2871	< 0.05	Yes
Practice(X_2)	0.9715	0.0517	18.7757	< 0.05	Yes
Attitude(X_3)	1.1822	0.0862	13.7104	< 0.05	Yes
$R=0.9777$, $R^2=0.9560$, $F(3,296)=2144.4$ $p<0.05$, S, SE : 5.7744					

*Significant at p= < 0.05

Interpretation

The regression equation predicting reproductive health (Y_1) in terms of knowledge (X_1), practice (X_2), attitude (X_3), was found to be as under

$$Y_1 = 0.8740X_1 + 0.9715X_2 + 1.1822X_3$$

The multiple R of the regression equation is 0.9777. The F–ratio 2144.4 was found to be significant at 0.05 level. Thus, the significance of R suggests that the estimation of reproductive health is possible on the basis of three predictors, namely, knowledge, practice, and attitude. Further, the regression equation shows that the attitude (1.1822) is being the highest predictor of reproductive health than all other predictors. Further, knowledge (0.8740) and practice (0.9715) can be used to predict reproductive health with the coefficient of multiple determinations of R^2 as 0.9560. The remaining percentage of variance has to be attributed to variables not considered in this study.

The SE_{est} for the regression equation is 5.7744. This means that each time the regression equation for the sample is used to predict reproductive health, the chances are about 1 to 2 in 100 that predicted reproductive health will not miss the actual reproductive health of adolescent girls by more than $\pm$5.7744.

The index of forecasting efficiency ($E = 100 (1-\sqrt{1 - R^2})$

Where, R^2 is 0.9560

Thus,

$$E = 100 (1-\sqrt{1 - 0.9560})$$

$$E = 100 (1-\sqrt{0.044})$$

$$E = 100 (1 - 0.2097)$$

E= 100 (0.7903)

E = 79.03

Thus, the obtained index of forecasting efficiency was found to be 79.03. This means that the prediction by the means of the regression equation is 79.03 percent better than those made merely on the basis of the mean of the Y_1 values.

The relative contributions of the three components – knowledge, practice and attitude of reproductive health in terms of proportions of co-efficient of determination predicted by each are given by the corresponding (β x r) values and are presented in the following table :

Table – 5.24: Relative Contributions of Knowledge, Practice and Attitude on Reproductive Health of Adolescent Girls

Variables	B	R	β X r	% of Contribution
Knowledge (X_1)	0.5062	0.9480	0.4799	47.9871
Practice (X_2)	0.3063	0.8579	0.2628	26.2772
Attitude (X_3)	0.2434	0.8765	0.2134	21.3370
Total			**0.9560**	**95.6013**

It is evident from the above table that about 95.6013 percent of the criterion variable is accounted for by the three predictors – knowledge, practice, and attitude, in case of reproductive health of adolescent girls. Out of this, about 47.9871 percent of the criterion is accounted for by the variation in knowledge, about 26.2772 percent by practice, and about 21.3370 percent by attitude. Thus, knowledge seems to be the best predictor of all

the predictor variables. The next best predictors of reproductive health in the order of priority are – practice and attitude respectively.

Finding

'Knowledge'of adolescent girls regarding reproductive health seems to be the best predictor of all the predictor components. The next best predictors in the order of priority are 'practice' and 'attitude' of adolescent girls towards reproductive health.

Prediction of Healthy Eating Habits of Adolescent Girls– An Analysis

The regression coefficients obtained for the dependent variable healthy eating habits is shown in the following table :

Table – 5.25: Regression Coefficients and Multiple Correlation Coefficients of Healthy Eating Habits(Y_1)

Variable	Reg. Coefficient	SE of Reg. Coefi.	t-value	p-level	Significance
Knowledge (X_1)	6.4420	2.3755	2.7118	< 0.05	Yes
Practice(X_2)	1.0648	0.0650	16.3895	< 0.05	Yes
Attitude(X_3)	0.9253	0.0437	21.1650	< 0.05	Yes
$R=0.9808$, $R^2=0.9620$, $F(3,296)=2499.8$ $p<0.05$, S, SE: 4.6881					

*Significant at p= < 0.05

Interpretation

The regression equation predicting healthy eating habits (Y_1) in terms of knowledge (X_1), practice (X_2), attitude (X_3), was found to be as under;

$$Y_1 = 6.4420X_1 + 1.0648X_2 + 0.9253X_3$$

The multiple R of the regression equation is 0.9808. The F–ratio 2499.8 was found to be significant at 0.05 level. Thus, the significance of R suggests that the estimation of healthy eating habits is possible on the basis of three predictors, namely, knowledge, practice and attitude. Further, the regression equation shows that the knowledge (6.4420) is being a highest predictor of healthy eating habits than all other predictors. Further, the practice (1.0648) and the attitude (0.9253) can be used to predict healthy eating habits with the coefficient of multiple determinations of R^2 as 0.9620. The remaining percentage of variance has to be attributed to variables which are not considered in this study.

The SE_{est} for the regression equation is 4.6881.This means that each time the regression equation for the sample is used to predict healthy eating habits ,the chances are about 1 to 2 in 100 that predicted healthy eating habits which will not miss the actual healthy eating habits of adolescent girls by more than $\pm$4.6881.

The index of forecasting efficiency ($E = 100 (1-\sqrt{1 - R^2}$)

Where, R^2 is 0.9620

Thus,

$E = 100 (1-\sqrt{1 - 0.9620}$)

$E = 100 (1-\sqrt{0.038}$)

$E = 100 (1 - 0.1949)$

$E = 100 (0.8051)$

$E = 80.51$

Thus, the obtained index of forecasting efficiency was found to be 80.51. This means that the prediction by the means of regression equation is 80.51 percent better than those made merely on the basis of the mean of the Y_1 values.

The relative contributions of the three components – knowledge, practice , and attitude of healthy eating habits in terms of proportions of co-efficient of determination predicted by each are given by the corresponding (β x r) values and are presented in the following table :

Table – 5.26: Relative Contributions of Knowledge, Practice and Attitude on Healthy Eating Habits of Adolescent Girls

Variables	β	R	β X r	% of Contribution
Knowledge (X_1)	0.2837	0.9097	0.2581	25.8065
Practice (X_2)	0.3754	0.9427	0.3539	35.3895
Attitude (X_3)	0.3764	0.9301	0.3501	35.0068
Total			**0.9620**	**96.2028**

It is evident from the above table that about 96.2028 percent of the criterion variable is accounted for by the three predictors – knowledge, practice, and attitude in case of healthy eating habits of adolescent girls. Out of this, about 25.8065 percent of the criterion is accounted for by the variation in knowledge, about 35.3895 percent by practice, about 35.0068 percent by attitude. Thus, practice seems to be the best predictor of all the predictor variables. The next best predictors of healthy eating habits in the order of priority are –attitude and knowledge respectively.

Finding

'Practice' of adolescent girls regarding the healthy eating habits seems to be the best predictors among all the predictor components. The next best predictors in the order of priority are 'attitude' and 'knowledge' of adolescent girls towards healthy eating habits.

Section – 5

5.5 Analysis of Variance (ANOVA)

5.5. Interaction Effect of Knowledge, Practice and Attitude on Reproductive Health

In order to investigate the main and interaction effects of components of the variable which are knowledge, practice, and attitude on dependent variable – reproductive health of adolescent girls, 3-way ANOVA was computed and tested for significance.

Table–5.27: Summary Table of ANOVA – Knowledge, Practice and Attitude on Reproductive Health

Sources of Variation	df	Sum of Squares	Mean Sum of Squares	F – Ratio	p - Value	Signifi-cance
Main Effects						
A. Knowledge (K)	1	32411.95	32411.95	197.7301	< 0.05	Yes
B. Practice (P)	1	1134.65	1134.65	6.9220	< 0.05	Yes
C. Attitude (A)	1	1778.12	1778.12	10.8475	< 0.05	Yes
2-way Interactions						
AXB (K X P)	1	3487.58	3487.58	21.2761	< 0.05	Yes
AXC (K X A)	1	1228.88	1228.88	7.4968	< 0.05	Yes
BXC (P X A)	1	1257.08	1257.08	7.6689	< 0.05	Yes
3-way Interactions						
AXBXC (K X P X A)	1	2468.22	2468.22	15.0574	< 0.05	Yes
Total	299	91631.16				

*Significant at p= < 0.05

Interpretation

Significance of obtained F_A, F_B, F_C, F_{AB}, F_{AC}, F_{BC} and F_{ABC}(F_K, F_P,F_A, F_{KP}, F_{KA}, F_{PA}, F_{KPA}) ratios are determined by referring to Table – F (Garrett) with df 1 (numerator) and 299 (denominator). The corresponding tabled F-ratio for all these factors is 3.89 at 0.05 level of significance.

(1) The obtained F-ratio in respect of the Factor – A is 197.7301 and the corresponding tabled F-ratio is 3.89. Since the obtained F-ratio is greater than the tabled F-ratio at 0.05 level, the difference is significant. Therefore, the hypothesis is accepted.

(2) The obtained F-ratio in respect of the Factor – B is 6.9220 and the corresponding tabled F-ratio is 3.89. Since the obtained F-ratio is greater than the tabled F-ratio at 0.05 level, the difference is significant. Therefore, the hypothesis is accepted.

(3) The obtained F-ratio in respect of the Factor – C is 10.8475 and the corresponding tabled F – ratio is 3.89. Since the obtained F-ratio is greater than the tabled F-ratio at 0.05 level, the difference is significant. Therefore, the hypothesis is accepted.

(4) The obtained F-ratio in respect of the interaction between the Factors – A and B is 21.2761 and the corresponding tabled F-ratio is 3.89. Since the obtained F-ratio is greater than the tabled F-ratio at 0.05 level, the difference is significant. Therefore, the hypothesis is accepted.

(5) The obtained F-ratio in respect of the interaction between the Factors – A and C is 7.4968 and the corresponding tabled F-ratio is 3.89. Since the obtained F-ratio is greater than the tabled F-ratio at 0.01 level, the difference is significant. Therefore, the hypothesis is accepted.

(6) The obtained F-ratio in respect of the interaction between the Factors – B and C is 7.6689 and the corresponding tabled F-ratio is 3.89. Since the

obtained F-ratio is greater than the tabled F-ratio at 0.05 level, the difference is significant. Therefore, the hypothesis is accepted.

(7) The obtained F-ratio in respect of the interaction between the Factors – A, B and C is 15.0574 and the corresponding tabled F-ratio is 3.89. Since the obtained F-ratio is greater than the tabled F-ratio at 0.05 level, the difference is significant. Therefore, the hypothesis is accepted.

Findings

(1) There is a significant difference between the effects of high and low knowledge in terms of their influence on reproductive health of adolescent girls.

(2) There is a significant difference between the effects of high and low practice in terms of their influence on reproductive health of adolescent girls.

(3) There is a significant difference between the effects of positive and negative attitude in terms of their influence on reproductive health of adolescent girls.

(4) There is a significant difference between the interaction effects of high/low knowledge and high/low practice in terms of their influence on reproductive health of adolescent girls.

(5) There is a significant difference between the interaction effects of high/low knowledge and positive /negative attitude in terms of their influence on reproductive health of adolescent girls.

(6) There is a significant difference between the interaction effects of high/low practice and positive/negative attitude in terms of their influence on reproductive health of adolescent girls.

(7) There is a significant difference between the interaction effects of high/low knowledge, high/low practice and positive/negative attitude in terms of their influence on reproductive health of adolescent girls.

5.5.2 Interaction Effect of Knowledge, Practice and Attitude on Healthy Eating Habits

In order to investigate the main and interaction effects of components of the variables which are knowledge, practice, and attitude on dependent variable – healthy eating habits, 3-way ANOVA was computed and tested for significance.

Table–5.28: Summary Table of ANOVA – Knowledge, Practice and Attitude on Healthy Eating Habits

Sources of Variation	d.f.	Sum of Squares	Mean Sum of Squares	F – Ratio	p - Value	Signifi-cance
Main Effects						
A. Knowledge (K)	1	7186.44	7186.44	53.8341	< 0.05	Yes
B. Practice (P)	1	5420.48	5420.48	40.6051	< 0.05	Yes
C. Attitude (A)	1	4495.57	4495.57	33.6766	< 0.05	Yes
2-way Interactions						
AXB (K X P)	1	5690.59	5690.59	42.6286	< 0.05	Yes
AXC (K X A)	1	1012.80	1012.80	7.5869	< 0.05	Yes
BXC (P X A)	1	849.85	849.85	6.3663	< 0.05	Yes
3-way Interactions						
AXBXC (K X P X A)	1	5793.19	5793.19	43.3972	< 0.05	Yes
Total	299	69428.68				

*Significant at p= < 0.05

Interpretation

Significance of obtained F_A, F_B, F_C, F_{AB}, F_{AC}, F_{BC} and F_{ABC} ratios are determined by referring to Table – F (Garrett) with d.f. 1 (numerator) and 299 (denominator). The corresponding tabled F-ratio for all these factors is 3.89 at 0.05 level of significance.

1) The obtained F-ratio in respect of the Factor – A is 53.8341 and the corresponding tabled F-ratio is 3.89. Since the obtained F-ratio is greater than the tabled F-ratio at 0.05 level, the difference is significant. Therefore, the hypothesis is accepted.

2) The obtained F-ratio in respect of the Factor – B is 40.6051and the corresponding tabled F-ratio is 3.89. Since the obtained F-ratio is greater than the tabled F-ratio at 0.05 level, the difference is significant. Therefore, the hypothesis is accepted.

3) The obtained F-ratio in respect of the Factor – C is 33.6766and the corresponding tabled F – ratio is 3.89. Since the obtained F-ratio is greater than the tabled F-ratio at 0.05 level, the difference is significant. Therefore, the hypothesis is accepted.

4) The obtained F-ratio in respect of the interaction between the Factors – A and B is 42.6286 and the corresponding tabled F-ratio is 3.89. Since the obtained F-ratio is greater than the tabled F-ratio at 0.05 level, the difference is significant. Therefore, the hypothesis is accepted.

5) The obtained F-ratio in respect of the interaction between the Factors – A and C is 7.5869 and the corresponding tabled F-ratio is 3.89. Since the obtained F-ratio is greater than the tabled F-ratio at 0.01 level, the difference is significant. Therefore, the hypothesis is accepted.

6) The obtained F-ratio in respect of the interaction between the Factors – B and C is 6.3663and the corresponding tabled F-ratio is 3.89. Since the obtained F-ratio is greater than the tabled F-ratio at 0.05 level, the difference is significant. Therefore, the hypothesis is accepted.

7) The obtained F-ratio in respect of the interaction between the Factors – A, B and C is 43.3972 and the corresponding tabled F-ratio is 3.89. Since the obtained F-ratio is greater than the tabled F-ratio at 0.05 level, the difference is significant. Therefore, the hypothesis is accepted.

Findings

1) There is a significant difference between the effects of high and low knowledge in terms of their influence on healthy eating habits of adolescent girls.
2) There is a significant difference between the effects of high and low practice in terms of their influence on healthy eating habits of adolescent girls.
3) There is a significant difference between the effects of positive and negative attitude in terms of their influence on healthy eating habits of adolescent girls.
4) There is a significant difference between the interaction effects of high/low knowledge and high/low practice in terms of their influence on healthy eating habits of adolescent girls.
5) There is a significant difference between the interaction effects of high/low knowledge and positive /negative attitude in terms of their influence on healthy eating habits of adolescent girls.
6) There is a significant difference between the interaction effects of high/low practice and positive/negative attitude in terms of their influence on healthy eating habits of adolescent girls.
7) There is a significant difference between the interaction effects of high/low knowledge, high/low practice and positive/negative attitude in terms of their influence on healthy eating habits of adolescent girls.

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CHAPTER-VI

FINDINGS, RECOMMENDATIONS AND CONCLUSION

6.1 INTRODUCTION

Adolescence is a stage in which a person endures major physical and social changes. It is a right of adolescent girls to gain knowledge to be safe, healthy and productive to live healthy and fruitful life. According to WHO (2008), in India, studies show that menstrual disorders, malnutrition, anemia, amenorrhea (the absence of monthly

menstrual periods), and genital infections are the most frequent complaints of adolescent girls. Among adolescent girls ,the onset of puberty not only bring changes physically, but also new vulnerabilities to human right abuses, particularly in the areas of sexuality, marriages and child-bearing (UNFPA, 2014). Therefore reproductive health and healthy eating habits is a crucial issue that is prevailing and particularly being faced by adolescent girls and they are lacking exposure in education and information to protect their health.

This chapter deals with , Recommendations , and conclusion. Overall this chapter consists of 12 sub-headings which are Introduction, Statement of the problem, Variables of the study, objectives of the study, Research Hypothesis, Scope of the Problem,Operational Definitions of the Terms, Design of the Study, Summary of the Findings, Educational Implications, Conclusions, Limitations of the Study, Suggestions and Scope for Further Research.

6.2 MAJOR FINDINGS

The study highlights the major findings and the identifies areas for future research. It presents and explains the major outcome of the research study and finding out the knowledge, practice, and attitude of reproductive health, healthy eating habits, the effect of family and social environment, need of guidance and counselling. In this chapter, the major findings are presented based on the differences in the opinion of adolescent girls from rural and urban areas. The findings are highlighted based on the objectives and hypothesis of the study.

6.2.1 Demographic Profile

- Overall respondents selected between the age group of 17-18 years.

- A majority of the respondents were selected from the age group of 18 years which is 247 (82.33%) of respondents, and 53(17.66%) were 17 years old.
- The region wise distribution of respondents that is 158 (52.67%) were from rural and 142 (47.33%) of girls were from urban areas.
- The data was collected on the basis of religious communities existing in India. Among the selected adolescent girls, a majority of them were Hindu 181 (60.33%), Muslim were114 (38%), and Christians were 05 (1.66%).
- As per the study, a majority of 197 (65.66%) of them belong to nuclear families and 103 (34.33%) of girls belong to joint families.
- Majority of 188 (62.66%) girls had a family income of below 30,000/- which means that majority of the respondents belong to poor socio-economic background.
- A majority of adolescent girls' parents had completed their PUC education, of whom 65 (21.67%) of the adolescent girls stated that their fathers and 90 (30%) of the adolescent girls stated that their mothers were able to complete only primary education.
- The study reveals that 46 (15.33%) of the adolescent girls stated that their fathers and 65 (21.6%) of their mothers were illiterate.
- The study reveals the respondents' parents where fathers 82 (27.33%) and mothers 72 (24%) had low wages as per their occupation.
- A major occupation among most parents is agriculture where 112 (37.33%) of the adolescent girls' father and 87 (27.33%) of their mothers were farmers.

6.2.2 Knowledge, Attitude, and Practice of Reproductive Health

6.2.2.1 Knowledge of Reproductive Health

- As per the study 150 (50%) of the adolescent girls were not aware that the menstruation is a physiological process.
- As per study 75 (25%) of the respondents had their were first menarche between 10 to 16 years. But majority of them who were not aware about it i.e., 179 (59.67%).
- Majority of adolescent girls 185 (61.67%) were not aware about average duration of menstrual cycle which is 5 to 6 days.
- Majority of adolescent girls 213 (71%) were not aware of government and non-government programmes on reproductive health.
- Majority of adolescent girls 215 (71.67%) were not aware of the hormone production that impact on physical and psychological changes during adolescence.
- The majority of the respondents 193 (64.33%) strongly agreed that they were aware of HIV/AIDS.
- As per the study, majority of participants 219 (73%) were not aware that 12-14 gm/dl is the normal hemoglobin level for adolescent girls.
- The study described the high awareness among participants about the legal age for marriage i.e., 242 (80.67%).
- A majority of respondents 193 (64.33%) were not aware about reproductive health.
- Knowledge was low about HIV test, about 128 (42.67%) of girls were not aware of it.
- Majority of of the participants (91.33%)were not knowing about issues of Menorrhagia problem (menstruation occurring twice a month).
- Higher percentage of girls i.e., 92.67% was not aware about issue of Ovarian Cyst (irregular menstruation).

- A majority 242 (80.67%) of the respondents stated that they were not aware of the complications of the teenage pregnancy.
- About 149 (49.67%) of adolescent girls were not aware that abortion is illegal in India.
- A majority of 172 (57%) of the respondents were not aware of using pills/ injections/ condom are better methods to avoid unwanted births.
- A majority of 222 (74%) of adolescent girls were not aware of the family planning information.

6.2.2.2 Practice of Reproductive Health

- The vast majority of 216 (72%) girls don't use using sanitary pads during menses.
- The higher percent of girls 240 (80%) of them did not practice of changing used cloth/ sanitary pads 3-4 times a day.
- About 164 (54.67%) of girls did not have a positive opinion and do not practice of washing private parts after every urination and defecation during menstruation in college.
- A majority of 217 (72.33%) adolescent girls were strongly agreed with the statement of using cotton clothes during menses and they opined that it is a healthy practice.
- A higher percentage of girls i.e., 245 (81.67%) were not aware of excessive painful bleeding, burning sensation and excessive white, yellowish discharge, and rashes which lead to reproductive health problems.
- About 247 (82.33%) of the participants are facing the problem of itching and rashes in their private area which is the cause of improper personal hygiene.

- A majority (59.67%) of respondents are facing the problem of burning micturition which is the symptom of urinary tract infection.
- A majority of 197 (65.67%) respondents strongly agreed that taking self medications (without doctor consultation taking tablets) during menstruation is a better option.
- A majority 217 (72.33%) of the respondents strongly disagreed with the statement that social media helps to gather information about reproductive health and related problems.
- A majority of 290 (96.66%) adolescent girls do not consult for an annual health check-up.

6.2.2.3. Reproductive Health of Attitude

- A majority of adolescent girls 184 (61.33%) responded positively about taking bath during menstruation.
- Most of the respondents 185 (61.67%) strongly agreed that HIV/AIDS infected persons should be isolated.
- A higher percentage of adolescent girls 246 (82%) were more concerned and interested in their peer groups.
- A majority of the respondents 179 (59.67%) positively agreed that there is need for the adolescent's education which can promote a healthy relationship between boys and girls.
- About 85 (28.33%) of the respondents positively agreed that the personal and social behaviour of adolescents may create problems in family and society.

- A majority of the adolescent girls 185 (61.67%) strongly agreed that repeated abortions can affect the health of a woman.
- A majority 182 (60.67%) of respondents agreed on the negative statement which states that menstruation leads to anemia .

6.2.3. Knowledge, Practice, and Attitude of Healthy Eating Habits

6.2.3.1. Knowledge of Healthy Eating Habits

- A majority of 215 (71.67%) adolescent girls did not know about a balanced diet.
- A majority of 213 (71%) of them have poor knowledge about red, yellow, and green coloured vegetables and fruits which are rich sources of vitamin 'A'.
- A majority of 219 (73%) participants were not aware of the utility of the calcium required for adolescents' growth and development.
- A majority of 221 (73.67%) adolescent girls were not aware of the requirement of vitamin 'K' for blood coagulation.
- A majority of 218 (72.67%) girls have a positive opinion that dry fruits are nutritious.
- A majority 190 (63.33%) of the respondents did not have knowledge about the fiber requirement.
- A majority of 217 (72.33%) adolescent girls do not know that height and weight measurements are the indicators of the nutritional status.
- The Iodine deficiency leads to goiter and about 152 (50.33%) of girls were strongly agreed with the statement.
- A majority of 182 (60.67%) respondents were not aware that menstruation leads to anemia which is a health problem.

6.2.3.2. Practice of Healthy Eating Habits

- 149 (49.67%) of the adolescent girls were aware of practicing hand wash using soap (before and after) every meal which is a healthy practice.
- A majority of 185 (61.67%) girls were not practicing the minimum intake of vegetables i.e., 8-10 times per week.
- The majority of 198 (66%) adolescent girls were not practicing the intake of fruits minimum i.e., 3-4 times per week.
- A majority of 198 (66%) adolescent girls were not aware of practicing a minimum of 10-12 glasses or 2 litres of drinking water in a day.
- 170 (56.67%) of the respondents do not include salads regularly, which they should be include in their daily diet.
- A majority of them 165 (55%) skip their daily breakfast and believed that it is a healthy practice.
- A majority of 218 (72.67%) respondents were not practicing the intake of the extra quantity of nutritious food during menstruation.
- A majority of 194 (64.67%) girls practice intake of snacksthinking that it is essential.
- A majority of 191 (63.67%) respondents were strongly agreed that fast foods are healthier than homemade food.
- 197 (65.67%) of the adolescent girls strongly disagreed with the statement that one should not take bath during menses.

- A majority of 213 (71%) respondents positively agreed with the statement i.e., the motives are the most likely to influence food choices on the desire to attain physical appearances.
- A majority of 184 (61.33%) adolescent girls were not aware of the issues of weakness, low levels of the blood are the sign of malnutrition and anemia.

6.2.3.3. Healthy Eating Habits of Attitude

- A majority of 198 (66%) of respondents do not have positive opinion about the statement that consumption of fruits ie., minimum 3-4 times per week.
- A majority of 189 (63%) respondents disagreed with the statement that snacks can supply nutrients.
- A majority of 186 (62%) girls agreed with the statement that eating regularly breakfast tends to have more adequate diet than missing breakfast one or more times a week.
- A majority of 179 (59.67%) adolescent girls agreed that the mass media affects their food choices.
- A majority of 215 (71.67%) respondents strongly disagreed that a balanced diet is not affordable for rural adolescent girls.
- A majority of 208 (69.33%) respondents strongly agreed that intake of fruit every day is not practical.
- A majority of 199 (66.33%) adolescent girls strongly disagreed that fast foods harms their health.

6.2.4. The effect of Family and Social Environment on Reproductive Health

- A majority of 149 (49.67%) adolescent girls do not feel comfortable about sharing physical changes with parents.
- A majority of 220 (73.33%) respondents agreed that discussing menstruation with peers is more comfortable.
- A majority of 233 (77.67%) adolescent girls are not interested in watching TV or listeing to radio talk which talk about reproductive health and its issues.
- A majority of 179 (59.67%) respondents do not feel comfortable discussing menstruation and related issues with their teachers.
- A majority of 206 (68.67%) respondents strongly agreed that teachers skip the lessons related to sexual and reproductive health.
- 79 (26.33%) of the respondent girls faced the feeling of isolation in family.
- 70 (23.33%) of the adolescent girls felt irritated because of isolation and ignorance towards their feelings in their family.
- A majority of 178 (59.33%) adolescent girls strongly agreed that their parents restricted a lot during menses.
- A majority of 214 (71.33%) respondents strongly agreed that the practice of restriction during menstruation should be changed.
- A majority of 157 (52.33%) adolescent girls strongly agreed that parents in rural areas were not aware of the developmental needs of their daughters.
- A higher percentage 289 (96.33%) of the respondents opined that the colleges do not provide safe drinking water and unhygienic toilets facility .

6.2.5. The effect of Family and Social Environment on Healthy Eating Habits

- A majority of 196 (65.33%) respondents positively opined that parents consult the doctor in case their daughters face health problems.
- A majority of 216 (72%) adolescent girls stated that parents did not create an environment to share their views.
- A majority of 210 (70%) adolescent girls strongly agreed that their parents avoid making to social gathering during menses.
- A majority of 199 (66.33%) adolescent girls strongly agreed that misleading information through social media is an actual cause of increasing nutritional problems.
- A majority of 196 (65.66%) adolescent girls agreed that parents are promoting in taking of snacks or fast foods to their daughters.
- A majority of 215 (71.67%) respondents strongly agreed that taste is the most influence on food choices.

6.2.6. Need of Guidance and Counselling in Reproductive Health and Healthy Eating Habits

- A majority of 248 (82.67%) adolescent girls are not interested in listening radio or watching TV shows talking on reproductive health and related issues.
- A majority of 218 (72.67%) adolescent girls strongly agreed that the increasing number of reproductive tract infection is due to lack of reproductive health education.
- A majority of 195 (65%) adolescent girls agreed that malnutrition is due to lack of less knowledge about nutrition.

- A majority of 220 (73.33%) girls strongly agreed that there is a need for education on reproductive health and nutrition in college curriculum.
- A majority of 245 (81.67%) adolescent girls strongly agreed that there is a need for counselling at the college level.
- The higher percentage of 238 (79.33%) adolescent girls have opined that there is a need to open counseling centre at the college level which is comfortable for sharing personal health problems.
- A majority of 200 (66.67%) adolescent girls positively opined that guidance regarding reproductive health and healthy eating habits should be activity based at college-level for better understanding.
- A majority of 195 (65%) adolescent girls agreed with the statement that malnutrition and anemia are high in adolescents which need guidance and counselling.

6.3. SUMMARY

The present study is aimed to assessing knowledge, attitude, and practice of reproductive health and healthy eating habits, the effect of family and social environment on reproductive health and healthy eating habits, need of guidance and counselling among adolescent girls aged between 17-18 years. The respondents are from government Pre-University college -going of rural and urban areas. The students were instructed to give their opinion and view on knowledge, attitude, and practice of reproductive health, knowledge, attitude, and practice of healthy eating habits, the effect of family and social environment, need of guidance and counselling. The respondents were also assessed about the socio- economic conditions of their family, parents' education and occupation which also contributes to health and other related issues. As per the study , concern on knowledge,

attitude, and practice of reproductive health and healthy eating habits among adolescent girls were assessed based on their knowledge on menstruation process, the age of first menarche, healthy average duration of menstruation, knowing of government and non-government programmes related to reproductive health, legal age of marriage, knowing about reproductive health, HIV/AIDS, issues of teenage pregnancy, knowing about abortion, Reproductive Tract Infections (RTIs), knowing about balanced diet, vitamins, calcium, fiber, benefits of taking fruits and vegetables, fast food, anemia, malnutrition, other reproductive health and other health related diseases. As per the results, the knowledge, attitude, and practice towards reproductive health and healthy eating habits were poor among adolescent girls. It shows that young girls still require immense knowledge, practice and positive attitudes. There is a need to inform them about reproductive health and healthy eating habits to create awareness related to menstrual health and hygiene, RTIs, HIV/AIDS, pregnancy, and nutritional information which promote them to adopt healthy eating habits, knowledge on family planning services, nutrition, healthy eating practices and need of counselling. Either they found it difficult to share their views with parents or the significant people have failed to provide effective awareness and had been negligent or due to lacking of knowledge on reproductive health and healthy eating habits. With regard to reproductive health and lacking of knowledgeabout nutritional health and issues, a majority of them were not aware. This could bring greater impact on adolescent girls' health who face physical issues. This could cause other related health diseases if they do not take effective precautions and better treatment. This study showed that colleges do not have a prominent role in the dissemination of reproductive health and nutrition related information, which require to implement these programmes. Poor awareness among girls was more in urban areas than

rural areas. The study highlighted the concern among adolescent girls on reproductive health and healthy eating habits, the effect of family and social environment related to reproductive health and healthy eating habits, and need of guidance and counselling. Lack of information from sources and poor preferences and choices in discussing their health issues with health professionals, the results of the study showed that knowledge, practice, and attitude has a greater impact on quality of their health.

6.4. RECOMMENDATIONS

The adolescent period is considered as an important period of human development. It is also a critical period for adolescent girls as they transit from childhood to the responsibilities of adulthood. When adolescent girls able to understand better about their biological system especially their body changes, they are able to face their entire pubertal stage with more confidently. It presents a window of opportunity because actions could be taken during this period to set the stage for a healthy adulthood and to reduce the likelihood of problems in the years that lie ahead (WHO, 2012). Today, adolescent girls need to be informed about proper knowledge on their growth, health and teach them skills to have a best practice for adopting healthy lives. In this regard , adolescent's health education can be a better option to understand health. In this regard, the present study brought out the following suggestions and recommendation to promote best reproductive health and healthy eating habits in knowledge, practice and attitude, need of guidance and counselling among adolescent girls.

- Friendly health services is effective for adolescent girls to facilitate them in understanding their health concerns and to provide safety preventive methods to overcome their health related issues. These services should be based on adolescent's point of view.

- Reproductive health issues are difficult to talk and discuss openly. Health promotion policies need to be issued by health policy- makers. To achieve this goal, efficient educational programmes and a variety of teaching and learning strategies should be adopted .
- Health workers can be trained to impart this knowledge through adolescent clinics at Primary Health Centers. Similarly, college teachers can be trained and suitable topics can be included in the college curriculum. Hence, there is a need of intervention during early adolescent period by contributing knowledge on reproductive health and nutrition to promote for the healthy eating habits.
- Adolescent girls require appropriate skills, and knowledge to protect them from risk behaviours. Therefore, risk assessment and implementation of healthy life style education training programmes will be effective at college level.
- It is important to address reproductive health issues as these get high cultural sensitivity. Strengths of mass media, parent-to–adolescent communication, peer-to–peer communication, and health professional- to–adolescent girls communication may need to be explored. It is best way to communicate different messages using different madia of communication.
- The policies of the government should ensure adolescent girls' health needs such as information and counselling. These should be available and accessible without any bias or prejudices especially, health policies should be indigenious and would be appropriate to the particular geographical, cultural, social , and environment condition. Programmes should highlight methods to eliminate risk behaviours connected with reproductive health related problems such as RTIs, HIV/ AIDS, etc.

- The public health care system (Primary Health Centers, Community Health Centers, Sub Centers and Government Hospitals) can highlight the need of reproductive health and nutritional care services for adolescent girls in colleges and community, participation of the parents is very essential. It should be clearly specific and focus its strategies on providing appropriate resources to enhance the quality of health facilities for adolescent girls.
- The Women and Child Development department should ensure college going adolescent girls needs and should sensitize the awareness programmes related to reproductive health nutrition.
- Adolescent girls require literacy, language and critical thinking skills to take up responsibility for their own health, through appropriate risk assessment and adoption of a healthy life style.
- A systematic and in depth assessment is required which should be participatory and should have the adolescent girls perspective to understand their health concerns and developmental needs.
- College education should be comprehensive in the development of adolescent girls. It should not rely only on academic focus, but it should also promote health and well-being of girls. Adding reproductive health education to college curriculum will provide perspectives towards their growth and development.
- Teacher training programmes should be appropriate keeping in mind the adolescent girls point of view especially, identifying their needs at class room level.
- Special education and training can be introduced for teachers on adolescent girls' health which can be incorporated in college curriculum especially highlighting reproductive health and nutrition.

- Parents are an important asset for adolescent girls to assess information about their growth and development. Parents' involvement in promoting their daughter's health is crucial.Therefore, well training from parents and education should focus on all the concerned programme which promote adolescent girls health.
- Sexual and reproductive health is considered as a taboo subject where most of the adolescent girls hesitate to express their needs and concerns or there is lack of a support system to address these needs. Therefore, activating youth forums at village or community level can eliminate misconception on reproductive health. They can build up positive attitude and they can share their issues for appropriate consultation and treatment.
- Health professionals can assess and help out adolescent girls in an empathetic manner. Counselling skills are needed which help in making them upgrade, so that their approach towards it would be appropriate and affiliating.
- The approach of health care professionals should be appropriate to the needs of adolescent girls, especially when they are in a crisis and require referrals. The educational management should organize the programmes and health check-ups services that health professionals provide should include information and education where they can become active participants for their own health.
- There is a need to make advance efforts that targets and improves in healthy eating habits among adolescent girls.
- Understanding the world of today's teens requires a primer in technology. Look around any college campus or shopping mall and observe teen girls with mobile devices actively texting the latest news and coordinating social activities. Creating awareness about the importance of Reproductive Health and Healthy Eating Habits

communication through using social networking sites like Facebook, Twitter, Instagram, Whatsapp, Snap chat etc, helps adolescent girls for active participation and can easily access more information .

- ❖ The college management should connect with the other departments (Women and Child Development, Family and Health Welfare and other Non-Government organizations) to deliver services and creating awareness about Reproductive Health and nutrition.
- ❖ There is a need for the appointment of Counsellors in college level which is essential and can contribute to adolescent girls and their parents in responding more about Reproductive Health needs and problems. It also helps to spend more time with adolescent girls to sensitize and understand the needs that will empower them to realize their well-being and dignity.
- ❖ Study provides background to understand knowledge, practice, and attitude among adolescent girls towards reproductive health and healthy eating habits and related health issues. Further educational and interventional research can be implemented to promote health of adolescent girls in colleges.

6.5. RESEARCHER'S OBSERVATIONS

- Awareness is more among adolescent girls of urban areas than rural areas .
- A majority of the study related to reproductive health, healthy eating habits, the effect of family and social environment and need of guidance and counselling.
- There is lack of knowledge, practice, and attitude about reproductive health and healthy eating habits.
- Poor family and social environment related to reproductive health and healthy eating habits among adolescent girls.

- Adolescent girls find difficulties to get information regarding reproductive health and nutritional aspects, especially the importance of healthy eating habits from their teachers.
- Lack of awareness among parents to guide their daughters regarding reproductive health and neglected towards them in guiding to adopt healthy eating habits.
- A majority of the adolescent girls feel that reproductive health education and need of counselling is required in educational institutions.
- Reproductive health covers all aspects of health.
- Lack of knowledge, practice, and attitude definitely affects health and can cause more risk regard to health issues in future.
- Education and training programme are required for adolescent girls.
- There is a requirement of adolescent friendly institutions.
- The difference between Western and Indian study is that western studies are basically 'education oriented' and Indian studies are 'information oriented' and assessed on adolescent girls on region among different college sector.

6.6. IMPLICATION TO SOCIAL WORK

Adolescent girls are at risk of reproductive tract infections (RTIs), sexually transmitted infections (STI's), HIV, and AIDs, unwanted pregnancy, malnutrition, anemia, and many are exposed to violence and fear. Mental health issues, suicide and relationship issues are disturbing the youthfulness of young people and reproductive health issues and negative perception makes them more vulnerable and these may continue throughout adult life where they may fail to build good prospects for themselves or they may face failures in family life situations. Addressing these issues and the needs of young people is a role and

challenge for health service providers. There might be require an integrated approach , legal frame work, social policy, and opportunity for health education, and community outreach programmes are also much helpful to facilitate young girls with their culture background.This may bring safety, and justice where these adolescent girls can stay healthy and will have a complete journey of adulthood.

Social Work approach is a unique among all helping professions because it focuses on people's problems in context of their social environment. Adolescence is the last phase before adulthood. Therefore, it offers parents, teachers , and health professionals an opportunity to educate a child towards his adult responsibilities. Social Work practice involves not only intervening with adolescent girls, but also with their families, educational institutions and environment where they live. It is difficult and challenging to work with adolescent girls who are at risk of emotional or to confront adversity, develop mechanism that promote resiliency. The indulgence and endorsement of reproductive rights are essential in theSocial Work profession. It is not only improves the health status of affected populations ,but also advocates effectively for social justice and to respond to globalized realities (Alzate, 2009). Social workers have wider opportunities to enhance the knowledge and skills to promote reproductive health through college social work as a counselor, promoting health education through training teachers, peer groups, and parents, through research, innovative programmes, and supportive programmes, planner in planning policies and also use of media to promote reproductive health information. The present study highlights the significance of reproductive health and nutrition education, promotion and intervention programmes through Social Work practice. It emphasizes the need for implementing reproductive health and healthy eating habits for adolescent girls and intends a Social Work agenda that will enhance and endorse adolescent health.

Historically reproductive health has been ignored which has brought negative impact on the lives of adolescent girls where they find lack of accessibility in fulfilling reproductive health needs. It has led to increase of high risk rates of HIV/AIDS, sexually transmitted infections, pregnancy, RTIs, unsafe abortions, anemia, malnutrition. Beside this, there has been lack in delivery of information due to various economic, and socio-cultural factors. Health care workers often act as a barrier to provide adolescent friendly services. In this regard, Social Work practice is a platform to promote reproductive health education through its methods and approaches in terms of supportive, non-judgmental, and youth appropriate health services. School social work approach is a new concept which is introduced in the Indian context to facilitate children and adolescents to enhance their well-being to achieve comprehensive development. Social Workers work in colleges as an educator, psychotherapist, social planner, and liaison between school and home (Wang 2003). Social workers who are appointed in educational settings provide social, emotional, and physical environment to strive in the best interest of young girls. In this point of view, social workers have great opportunities to implement social work methods to enhance the well-being of adolescent girls. Based on the current research and opinions of the participants, following are the social work intervention plan provides an innovative type of approaches to work with adolescents.

Why the Social Worker's Role is essential in Colleges

Due to rapid urbanization and modernization , adolescent girls have exposed more in society, it effects on breakdown of the family structure. In colleges, the management concentrate only to cover syllabus in faster way, does not care about the student's needs, especially the adolescent girls who face confusion, isolation, health problems and vulnerable to maladaptive pattern of thinking. Understanding family and college

managemanet systems and linking adolescent girls with their families and with the college services is essential for the success of adolescent girls . The trained social worker plays important role in colleges for assessment, consultation, collaboration, and intervention strategies to address the health issues especially towards reproductive health and healthy intake.

i. **Essential Tasks:** It is not just only to create awareness among the adolescent girls related to reproductive health and nutrition, but there are various types of work which can be performed.

- Review students' records to identify previous barriers and interventions.
- Conduct parent's interviews to acquire knowledge about reproductive health and nutrition as needed for special education refferrals.
- Interview with adolescent girls and parents to discuss about menstruation health and issues to develop bonding.
- Assist the college in following the college board regulation for student's and intervention.
- Implementing training related to reproductive health and importance of nutrition intake for educational staff and parents.
- Provide individual and group counselling for adolescent girls in response to their personal issues.
- Conduct the intervention based activities for adolescent girls related to reproductive health in colleges.
- After interviewed with parents, conduct home visits to access the families and discuss more information about reproductive health which could helps to strengthen the relationship between daughter and mother.

- Maintain an ongoing liason with community agencies and other resources to meet adolescent girls' needs, refers parents and adolescent girls to agencies.
- Application of theory, principles, and methods of social work including case work, group work, community organization, supervision, planning, and research help adolescent girls to become competent and healthy adults.
- Social work practice in colleges provide systematic linkages between the social work profession and social entities which affect development of adolescent girls and promote health and their well- being.
- Implication of programmes in colleges and communities which will increase the likelihood in using available services such as reproductive health, HIV/AIDS, and other reproductive health problems.

There is great need for social workers in Pre-University college level and they are only one who can address the issues of adolescent girls better than the teachers. In India, there are no social workers in government Pre-Unieversity colleges yet. Even, the management also does not recognize the importance of social workers, hardly very few private college management have the counsellors. This situation has to be changed and should help the adolescent girls to strengthen the knowledge, practice, and maintain the attitude about reproductive health and healthy eating habits and also solving their problems independently.

1. Implication to Social Work theories

Health of Adolescent girls is an integral part of adolescent's development which helps to move into next adult stage with full potential and productive persons. The present study directs that adolescent girls required to build a positive behaviour to live a healthy life. Working with young girls and intervening their problems is challenging. Social work

practice is not just with girls but also need to work with their families, parents, colleges, teachers, and health professionals. Social Work practice is based on theoretical knowledge and their implication to intervene issues and problems of people. Helping adolescent girls to confront adversity and develop mechanisms that promote resiliency is critical, especially for adolescent girls.Therefore , Social work needs to be dealt with essential theories to intervene with health of girls.The following theories suggested are effective to practice Social Work while working with adolescent girls.

1.1.Pealman's Problem Solving and Supportive approaches: This approach focuses on solutions rather than analyzing the problems. It designed to enhance adolescent's strength. Problem solving reinforcement, miracle questioning, task oriented, stress management techniques, brainstorming, re-framing which can be used to change their negative perspective into something new with a positive and creative perspective.

1.2. Expressive Therapy: Individual can express emotions through dance, music, drawing, yoga, and meditation etc.

1.3. Muscle Relaxation Therapy: It is used by to tightening and relaxing specific muscle groups in sequence. It is also called as progressive relaxation therapy to make students aware of body and physical sensation. It is basically used for reducing fear etc.

1.4. Group Therapy: A group therapy is an approach to counselling that is very effective for adolescent girls. Participating in group therapy sessions which helps their growth and development. Activity based therapy such as ice breakers, role play, and various games help them to access more knowledge and socialize with others.

1.5. Family Therapy: this therapy is an approach that helps adolescent girls by addressing interpersonal and family issues. This therapy helps adolescent girls and families including;

- Improving communication.

- Reducing hesitation and improving to share their personal views with their parents.
- Improving home environment.
- Developing healthy boundaries.

1.6. Interpersonal Therapy: This approach focusses on interpersonal relationships and social interactions. Social and interpersonal relationship plays an important role in addressing problems with loneliness in case of adolescent girls.

2. Implication to Social Work Research

Health of adolescent girls is a crucial and new area of concern. In order to make a healthy transition, adolescent girls need to access quality health education including reproductive health and healthy eating habits through supportive environment both at home, communities as well as at educational institutions. Young girls have issues which are not dealt in a systematic methods. The findings from the present research indicate that social workers contribution to improve the knowledge, practice, and attitude among adolescent girls is necessary. In this regard, the methodological rigor and research oriented quality of studies would be effective. Social work research can contribute and indentify the effectiveness to improve the behavior of adolescent girls to understand their age as positive development and to seek better health care services. Thus, this research knowledge may play pivotal role in advocating government to introduce appropriate policies for the adolescent girls. Health professionals should provide them friendly atmosphere, and educational institutions should provide quality education which works for the comprehensive development of adolescent girls.

Beside this, indigenous based research activities are required to work with adolescent girls in developing country like India. Health of adolescent girls , especially in

discussing on reproductive health concern and issues considered as taboo and misconceptions are still prevailing in rural areas. This is still exit where girl cannot talk or discuss regarding reproductive health in public places and they themselves hesitate to access health care services. They have negative opinion about health care providers think about confidentiality, judgmental attitude etc. Many adolescent girls are not aware of reproductive health services available for adolescent girls. Social Work research come out with these issues and can provide a platform to implement direct effective methods for social work practice.

3. Future Directions

Adolescents need a facilitating environment to live a healthy and prosperous life. They require educative programmes to enhance their knowledge and skills to adjust with issues. Adolescence is a stage in which an every individual required to develop one's own capacity and talents to acquire a healthy and productive life. Due to rapid globalization and urbanization, division and changes are taking place in social institutions as well as in traditional social systems. Adolescents needs to be empowered in the current context especially in India. There is a growing evidence of increased psychological, behavioral problems such as suicide, depression and moreover, reproductive health issues etc. Social work profession emphasizes the importance of a person in environment and dual perspective.Health is influenced by both these factors and young people directly or indirectly affected by the health of the families and communities. In this regard, the above suggested social work intervention model at school level may be effective to provide adolescent friendly services to equip them with their knowledge, help them to learn positive behaviours and particularly to use health services.

6.7. IMPLICATIONS TO FURTHER RESEARCH

Health of adolescents is very important component to promote well-being of young people, especially in developing countries. In India, promoting adolescents' health and education is the need of the hour where it stands at 20 percent of the population. To implement this, it requires evidence based information about adolescents in social, economic, cultural and other democratic context. Several studies and literature provide the need of adolescent's education in India. Majority of adolescents face number of reproductive health issues and many of them are getting into risk behaviours. There is a greater need of assessment to enhance quality of life of people through research and intervention programmes. The present study provides an impetus to work more on improvement of reproductive health education for adolescents. Study findings showed that despite more awareness , adolescents require positive attitude towards reproductive health. Further, there is a lack of utilization of adolescents' needs and health services. It really indicates that adolescents need to uplift their thinking level where they require a positive approach, a kind of assessment, right source of information and designing intervention strategies.

In this regard, reliable research should suitable which provides qualitative and quantitative data.

Standardized research methods are required to identify the best approaches to facilitate adolescent's needs, sexual needs , reproductive health education, and intervention and evaluate the impact of such education. The study also recommends to have qualitative research to assess sources of information mainly focusing on parents, teachers, peer group and media influence. Evaluative and educational intervention programmes through research activities are suitable to enhance the knowledge and attitude of significant people which definitely may bring positive impact in adolescent's knowledge perception. Indigenous

social work based research is also important in the context of promoting reproductive health education which refers to the unique tradition, local knowledge existing within a particular environment and developed around the specific conditions of people and indigenous to a particular geographical area (Makhubele, 2013). Such gaps in current knowledge of sexual and reproductive health would be useful in making policies, strategies, intervention programmes help in promotion of adolescent health education.

6.8. CONCLUSION

The major discovery in this study tells about moderate level of knowledge, poor in practice and attitude on reproductive health and healthy eating habits among adolescent girls. Adolescent girls who had good awareness were able to recognize and understand their reproductive health issues and those who were lacking in awareness were not able to understand reproductive health and nutrition related issues. Those who do not have awareness and positive attitude towards reproductive health will be more vulnerable to reproductive health problem, where they may face health issues and poor access to health services. It is very true and proved in this study. As per this study, most of the adolescent girls face emotional disturbances. It shows that a majority of them were not in favor of discussing on such issues, and seek information on reproductive health. Most of the adolescents have poor reproductive health and less knowledge on nutrition intake where they find lack of confidence, confidentiality, availability, affordability of health care services and poor opinion towards health professionals. Many adolescent girls desire for reproductive health and nutrition related education and training programmes at educational institutions. Overall, adolescent girls have less awareness on such issues. The Present study determines that awareness on reproductive health and healthy eating habits and perceiving positive attitudes are necessary for adolescent girls to understand their reproductive health

and nutrition related issues that help them to have positive health. Health education for the adolescent girls can be a better option to understand health and it can provide good and effective behaviour to protect their life in formal and private sectors as well as within a conducive environment that will allow privacy and confidentiality. These sectors should promote reproductive health which covers comprehensive health aspects of an individual without any discrimination, gender bias and should reach all kind of people. Significant people like parents, teachers, health professionals, and trained social workers have a greater role in educating adolescent girls to sensitize their issues and to create adolescent friendly environment so that they can share and get better care. Social worker and other health professionals should cooperate with colleges and other stakeholders within a community to understand adolescent girls as the most vulnerable group and help them through frequently visits in order to understand their need, make referral and advocate their right. The present study suggests that an effective comprehensive intervention is must in promoting Reproductive Health education and importance of nutrition intake through counseling. Social work intervention programmes should be conducted to reduce risky health behaviors. The government policies and programmes must be responded to the reproductive health needs of adolescent girls. The adolescents' reproductive health and development policy should bring adolescents' health issues to the mainstream of health and development. Besides this policy, it should examine the current determinants (social, economic, cultural and demographic context) of adolescent as well as sexual and reproductive health. These programmes should fulfill their potential, substantive investment which must be made for their education, health development ,and others areas. To conclude, this study seeks to assess knowledge that adolescent students possess on reproductive health. The study is based on preference of adolescent girls in their

knowledge, practice, and attitude on reproductive health and healthy eating habits sources from which adolescent girls get that knowledge. Overall, the study is a constructive stuff to gather insight into reproductive health and importance of nutrition intake among adolescent girls in Vijayapura that will help in functional information for the reinforcing of efforts to promote adolescent health.